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**PROGRAM LEVEL EVALUATION OF
ASAP DIAGNOSIS, REFERRAL AND
REHABILITATION EFFORTS**

**Volume III - Analysis of ASAP Rehabilitation
Countermeasures Effectiveness**

Contract No. DOT-HS-191-3-759

September 1976

Final Report

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16. Abstract <p>The present report describes the client flow through rehabilitation systems of the 35 NHTSA funded Alcohol Safety Action Projects (ASAPs) during the 1972-1974 period of project operations, summarizes project initiated analyses of treatment program effectiveness, and reports program level (across project) analyses of total treatment system and individual treatment modality effectiveness based upon rearrest recidivism (for alcohol related offenses) data reported by the projects.</p> <p>During the 1972-1974 period addressed by this report, a total of 140,540 court referred clients were exposed to a variety of ASAP supported or coordinated rehabilitation programs, at a cost to the ASAPs of \$5,346,502. The most extensively used treatment alternatives were ASAP initiated alcohol safety schools, although substantial use was also made of community alcohol rehabilitation resources.</p> <p>Evaluation of ASAP rehabilitation system effectiveness was hampered, at both program and project levels, by a lack of adequate experimental designs which provided no-treatment groups whose performance could be compared to that of treatment groups. Some indications of program effectiveness were found, particularly for problem drinkers.</p>					
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METRIC CONVERSION FACTORS

Approximate Conversions to Metric Measures

Symbol	When You Know	Multiply by	To Find	Symbol
LENGTH				
in	inches	*2.5	centimeters	cm
ft	feet	30	centimeters	cm
yd	yards	0.9	meters	m
mi	miles	1.6	kilometers	km
AREA				
in ²	square inches	6.5	square centimeters	cm ²
ft ²	square feet	0.09	square meters	m ²
yd ²	square yards	0.8	square meters	m ²
mi ²	square miles	2.6	square kilometers	km ²
	acres	0.4	hectares	ha
MASS (weight)				
oz	ounces	28	grams	g
lb	pounds	0.45	kilograms	kg
	short tons	0.9	tonnes	t
	(2000 lb)			
VOLUME				
tsp	teaspoons	5	milliliters	ml
Tbsp	tablespoons	15	milliliters	ml
fl oz	fluid ounces	30	milliliters	ml
c	cups	0.24	liters	l
pt	pints	0.47	liters	l
qt	quarts	0.95	liters	l
gal	gallons	3.8	liters	l
ft ³	cubic feet	0.03	cubic meters	m ³
yd ³	cubic yards	0.76	cubic meters	m ³

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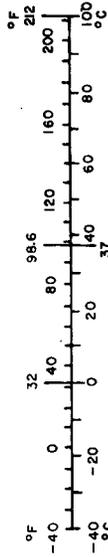
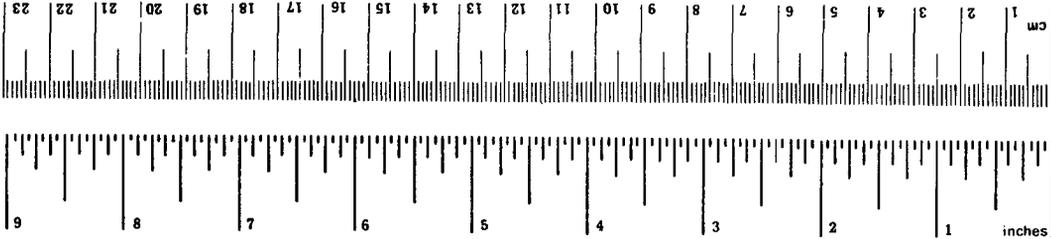
°F	Fahrenheit temperature	5/9 (after subtracting 32)	Celsius temperature	°C
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Approximate Conversions from Metric Measures

Symbol	When You Know	Multiply by	To Find	Symbol
LENGTH				
mm	millimeters	0.04	inches	in
cm	centimeters	0.4	inches	in
m	meters	3.3	feet	ft
m	meters	1.1	yards	yd
km	kilometers	0.6	miles	mi
AREA				
cm ²	square centimeters	0.16	square inches	in ²
m ²	square meters	1.2	square yards	yd ²
m ²	square meters	0.4	square miles	mi ²
ha	hectares (10,000 m ²)	2.5	acres	
MASS (weight)				
g	grams	0.035	ounces	oz
kg	kilograms	2.2	pounds	lb
t	tonnes (1000 kg)	1.1	short tons	
VOLUME				
ml	milliliters	0.03	fluid ounces	fl oz
l	liters	2.1	pints	pt
l	liters	1.06	quarts	qt
l	liters	0.26	gallons	gal
m ³	cubic meters	35	cubic feet	ft ³
m ³	cubic meters	1.5	cubic yards	yd ³

TEMPERATURE (exact)

°C	Celsius temperature	9/5 (then add 32)	Fahrenheit temperature	°F
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* 1 m = 2.54 (exactly). For other exact conversions and more detailed tables, see NBS Misc. Publ. 286, Units of Weights and Measures, Price \$2.25, SD Catalog No. C13.10.286.

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INTRODUCTION

In June, 1970, the U.S. Department of Transportation funded nine traffic safety countermeasure demonstration projects which came to be known as Alcohol Safety Action Projects (ASAPs); twenty additional projects were funded in 1971, and a final six projects were initiated during 1972. The goal of these projects was to produce a reduction in alcohol related motor vehicle crashes by reducing the number of persons in each community who drive while intoxicated. A parallel objective of the NHTSA in funding the ASAPs was to demonstrate the feasibility of an integrated systems approach to the alcohol traffic safety problem. To accomplish these goals each project was designed to coordinate the activities of existing state and local agencies such that each ASAP functioned as an efficient drinking driving control system.¹ Traditional traffic safety/driver control agencies such as traffic courts, law enforcement agencies, and motor vehicle departments were included within the ASAP system, and the countermeasure activities of these agencies were expanded and strengthened. In addition to these traditional driver control countermeasures, however, each of the ASAPs has also developed and implemented a system of drinker/driver rehabilitation countermeasures designed to modify the behavior of persons convicted of alcohol related traffic offenses in a manner that will reduce the probability of subsequent drinking/driving behavior. In general this component of the ASAP drinking driver control system has included a number of functions funded and coordinated by each of the projects in order to provide a link between the courts and alcohol rehabilitation facilities. Chief among these functions are: diagnostic procedures to discriminate between problem and non-problem drinker drivers, ASAP "transition" rehabilitation programs, and referral mechanisms to provide for the non-voluntary referral of clients to

¹Joscelyn, J. D. and Jones, R. K. A systems analysis of the traffic law system: summary volume. NHTSA Report No. DOT-HS-800-640, Institute for Research in Public Safety, Indiana University, October, 1971.

extended alcohol rehabilitation programs run by community agencies. Figure 1 illustrates the conceptual model recommended by the NHTSA for the development of individual ASAP rehabilitation countermeasure programs. Rehabilitation systems similar to this model were a part of each of the 35 projects and during the 1972-1974 period of ASAP operations addressed by the present report. More than 168,782 individuals arrested for alcohol related traffic offenses were contacted by some form of diagnosis, referral or rehabilitation countermeasure activity.

EVALUATION OF REHABILITATION PROGRAMS

Detailed evaluation of the impact, effectiveness, and performance of each component of the ASAP alcohol countermeasures systems has been a primary focus of attention at both the program and individual project level. NHTSA requirements which governed the development and implementation of the 35 ASAPs stipulated that a major portion of each project's budget be allocated to the provision of a comprehensive local evaluation capability, and each project was charged with the responsibility for the submission of effectiveness and performance data to the NHTSA as well as with the responsibility for annual analyses of each major countermeasure area of the project.

With respect to drinker diagnosis, referral, and rehabilitation countermeasure functions each of the 35 projects was required to submit quarterly data tables which reflected:

1. Presentence investigation activity - "Appendix H, Table 11."
2. Rehabilitation financial data - "Appendix H, Table 12."
3. Medical/psychological diagnostic activity - "Appendix H, Table 13."
4. Rehabilitation program client processing performance - "Appendix H, Table 14."

An annual data table ("Appendix H, Table 15") was also required which summarized alcohol related traffic offense recidivism for individuals assigned to the various

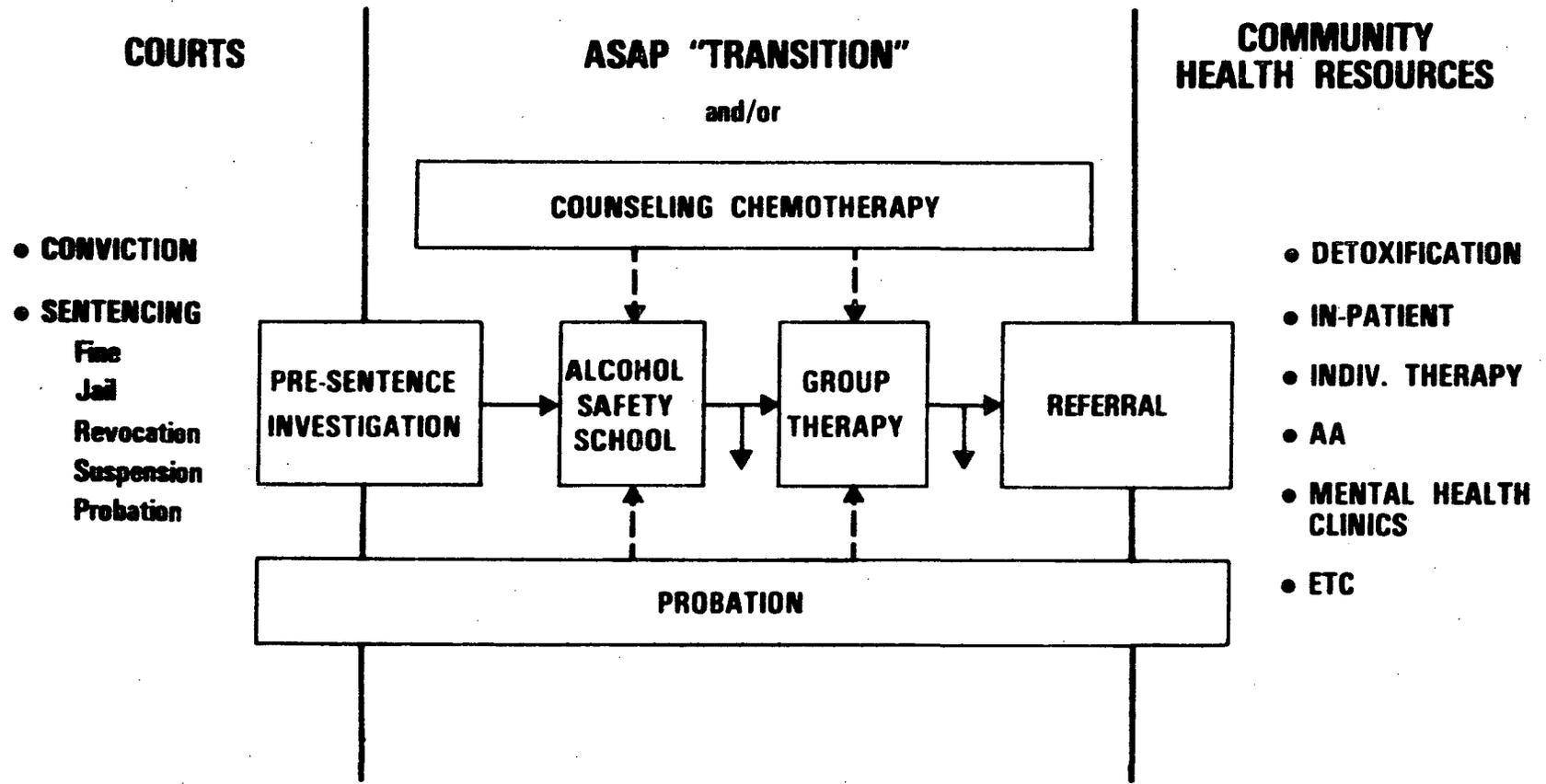


FIGURE 1. ASAP DIAGNOSIS, REFERRAL AND REHABILITATION SYSTEMS MODEL

rehabilitation programs operated, or coordinated, by a particular site. These data reporting requirements were intended to provide the basis for the monitoring of diagnosis, referral and rehabilitation functions at each project, and also to establish a standard data base which could be used to accomplish national (program level) evaluation of these ASAP countermeasures.

In addition to their data reporting requirements, each site was required to prepare annual studies of diagnostic and referral activity (Analytic Study No. 5), and of rehabilitation performance and effectiveness (Analytic Study No. 6). These studies were expected to provide detailed assessments of performance and effectiveness tailored to the unique characteristics of the diagnostic, referral and rehabilitation system at each ASAP.

The Analytic Study 5 topics suggested by NHTSA guidelines called for:

1. a detailed description of the diagnostic and referral system;
2. consideration of the reliability and validity of diagnostic procedures;
3. consideration of the reliability, validity, and appropriateness of referral procedures; and
4. assessments of the performance, efficiency and effectiveness of the diagnostic and referral process.

Analytic Study 6 guidelines issued by the NHTSA stipulated:

1. a detailed description of alternative rehabilitation modalities, and the characteristics of the clients processed by each;
2. assessments of the effectiveness of treatment programs in reducing crash and alcohol related arrest recidivism or in producing positively valued life changes; and
3. assessments of the performance and efficiency of rehabilitation countermeasures.

Program level evaluation of diagnosis, referral, and rehabilitation countermeasures has been performed as an internal NHTSA function, and has also been a principal task of the current contract between the NHTSA and the University of South Dakota. NHTSA's summary and analysis of these countermeasures has been contained in annual reports published in 1974 and 1976.²³ Efforts under the current contract have focused on description of ASAP diagnosis, referral and rehabilitation countermeasure systems; critical review of project initiated evaluations of countermeasure activity; and program level (across projects) analyses of diagnosis, referral and rehabilitation countermeasure performance and effectiveness. A number of interim reports have been submitted relating to this activity during the 1973-1976 period of the present contract. ⁴⁵⁶⁷⁸⁹¹⁰¹¹

²NHTSA, Office of Alcohol Countermeasures, Alcohol Safety Action Projects: Evaluation of Operations, Volume III, 1972.

³NHTSA, Office of Driver and Pedestrian Programs, Alcohol Safety Action Projects: Evaluation of Operations - 1974, Vol. II Detailed Analysis, 1976.

⁴Ellingstad, V. S. and Struckman, D. L. Preliminary guidelines for alcohol safety action project evaluation procedures: Appendix H - Table 15 and analytic study No. 6. Interim Report, Contract DOT-HS-191-3-759, Human Factors Laboratory, University of South Dakota, December, 1973.

⁵Ellingstad, V. S. and Struckman, D. L. Alcohol safety action project diagnosis and referral evaluation efforts: A review of reporting procedures. Interim Report, Contract DOT-HS-191-3-759, Human Factors Laboratory, University of South Dakota, April, 1974.

⁶Ellingstad, V. S. Alcohol safety action projects: 1975 interim assessments of alcohol rehabilitation efforts, analytic study No. 6. Interim Report, Contract DOT-HS-191-3-759, Human Factors Laboratory, University of South Dakota, March, 1976.

⁷Reis, R. E. A preliminary program level evaluation model for alcohol safety schools. Interim Report, Contract DOT-HS-191-3-759, Human Factors Laboratory, University of South Dakota, July, 1974.

The present document is the third of four volumes designed to serve as the final report of activity and findings under contract DOT-HS-191-3-759. Volume I of this report (Description of ASAP Diagnosis, Referral and Rehabilitation Functions) describes the diagnosis, referral and rehabilitation systems of each of the 35 ASAPs and is designed to serve as a reference to the analytic topics covered in remaining volumes. Volume II (Analyses of ASAP Diagnosis and Referral Activity) focuses on the diagnostic and referral countermeasure activities of the ASAPs and includes both a summarization of project initiated evaluations of these functions as well as program level analyses of diagnostic and referral performance based on "Appendix H" data and on client file data obtained from selected projects. Volume IV [Development of the Short Term Rehabilitation (STR) Study] describes the development, implementation and current status of the NHTSA Short Term Rehabilitation (STR) Study which may be considered to be an outgrowth of ASAP diagnosis, referral and rehabilitation countermeasures

⁸Reis, R. E., Smith, M. F., and Beach, M. E. Interim assessments of the impact of ASAP on the traffic safety system: 1974 analytic studies No. 4. Interim Report, Contract DOT-HS-191-3-759, Human Factors Laboratory, University of South Dakota, January, 1975.

⁹Reis, R. E. Alcohol safety action projects: 1975 interim assessments of ASAP impact on the judicial system, analytic study No. 4. Interim Report, Contract DOT-HS-191-3-759, Human Factors Laboratory, University of South Dakota (in press), 1976.

¹⁰Struckman, D. L., Spiegel, D. K., Olshan, M. D., Springer, T. J., and Sapp, J. H. Interim analyses of drinker diagnosis, referral and rehabilitation countermeasures: 1974 analytic studies No. 5 and 6. Interim Report, Contract DOT-HS-191-3-759, Human Factors Laboratory, University of South Dakota, December, 1974.

¹¹Struckman-Johnson, D. L. Alcohol safety action projects: 1975 interim assessments of drinker diagnosis and referral, analytic study No. 5. Interim Report, Contract DOT-HS-191-3-759. Human Factors Laboratory, University of South Dakota, March, 1976.

tested during the regular operational periods of the 35 ASAPs. This study involves eleven of the ASAPs (those projects granted operational extensions beyond the 1974 termination date of the remaining projects), and employs a large scale experimental design which was developed to provide a systematic test of the effectiveness of selected short term rehabilitation treatment modalities.

The current volume addresses the performance and effectiveness of rehabilitation countermeasure systems operated by the 35 ASAPs during the 1972-1974 period of project operations.

Three major topic areas are included in this program level summary and evaluation of rehabilitation countermeasures. The first describes rehabilitation system performance within the 35 projects and at the program level. Included in this section is a description of client caseflow through the ASAP rehabilitation systems, discussion of costs incurred by the ASAPs in providing for or coordinating rehabilitation services, and consideration of the capacity of the ASAP rehabilitation countermeasures to retain and process clients referred to them by the courts. The primary data source for these analyses were "Appendix H" data tables submitted by each of the projects, although some data were obtained from Analytic Studies 5 and 6 submitted by the individual projects.

The second section of the present volume attempts to summarize evidence of the effectiveness of ASAP rehabilitation countermeasures. The primary success criterion available to the analyses summarized in this section is rearrest recidivism on alcohol related traffic offenses. Total rehabilitation system effectiveness as well as the effectiveness of individual rehabilitation countermeasure programs is addressed in this section. Data sources used for this purpose included both "Appendix H" data (particularly "Table 15") and Analytic Studies 6 submitted by the projects in 1973, 1974, and 1975.

The final topic addressed in the present report is the identification of factors influencing the effectiveness of rehabilitation countermeasures. The primary focus of this section is on the comparison of client profiles between recidivists and non-recidivists, and between clients who completed and those who did not complete rehabilitation programs. The intent of these analyses is to identify factors (other than the treatment program) which exert an influence on outcome criteria such as recidivism.

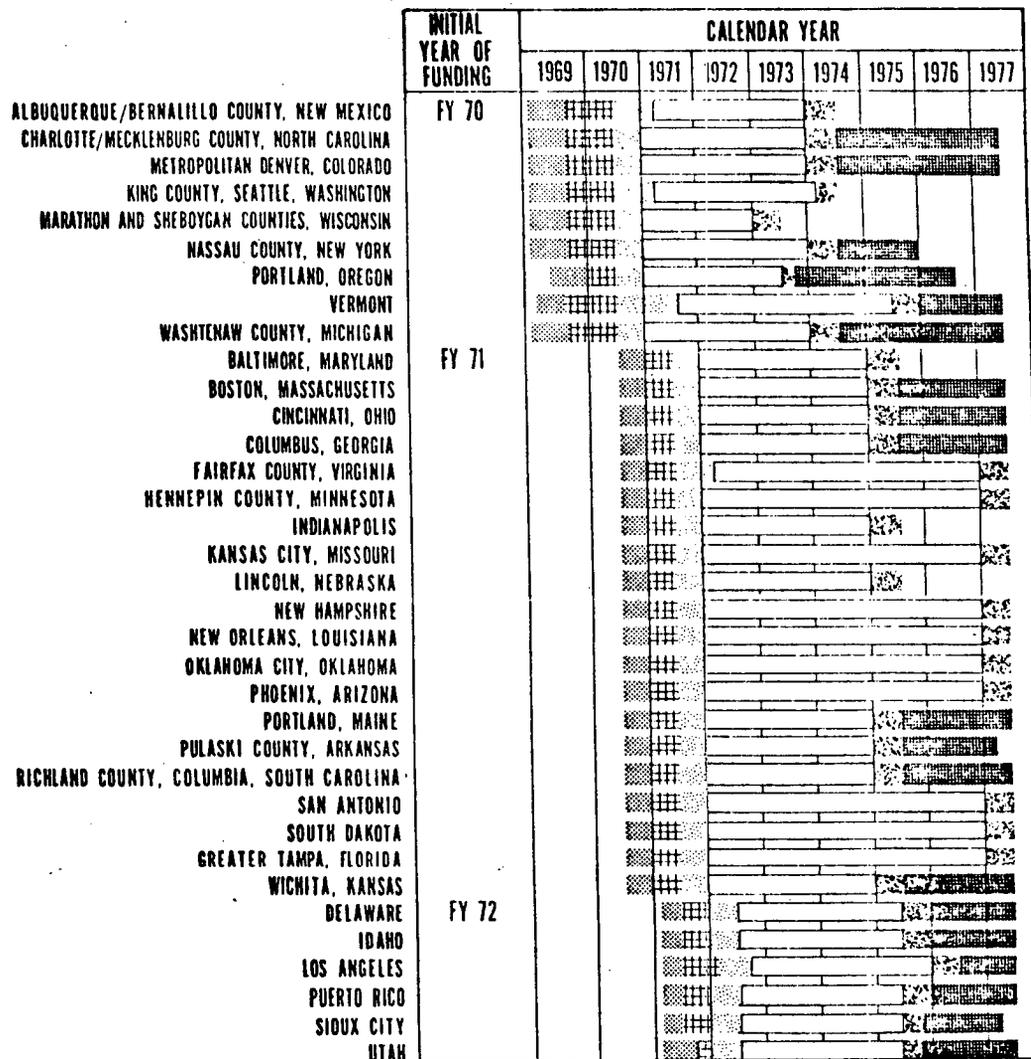
ASAP REHABILITATION SYSTEM PERFORMANCE

The present report addresses ASAP rehabilitation countermeasure activity during the 1972-1974 period. All 35 ASAPs are represented in analyses of rehabilitation system performance and effectiveness although only the twenty projects initiated in FY 1971 were operational during the entire three year time span. Figure 2 shows the complete schedule of ASAP activity for the entire set of 35 projects.

The FY 1970 projects were selected as prospective demonstration project sites during 1969, entered a six month project initiation phase between July, 1970, and January, 1971, and began their operational periods in January of 1971. With the exception of the Wisconsin, Oregon, and Vermont projects, the operational activities of these ASAPs were completed during the 1971-1973 period. The Wisconsin project was operational for only two years (1971-1972), while the Portland, Oregon, project terminated after two and one-half years of operations. The Vermont project was initiated in 1971, and continued operational activity until mid-1975. As a result of their scheduling, data were available from the first nine projects (except Vermont) for only the 1972-1973 period.

The second twenty ASAPs were funded at the beginning of FY 1972, and entered their operational periods in January of 1972. The regular period of operations for these projects extended through December, 1974, although ten of these projects received two year operational extensions in order to continue countermeasure activities during 1975 and 1976. Complete data were available from this group of ASAPs.

The final six ASAPs were funded in January, 1972, and began their three year operational periods in July, 1972. The scheduled termination date for these projects was June, 1975. Only partial data were available from these ASAPs for the 1972 calendar year, although complete 1973-1974 data were available for program level analyses presented in this report.



- -
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- SITE SELECTION AND APPLICATION □ OPERATIONAL PHASE
 ▨ PROPOSAL DEVELOPMENT PHASE ▩ FINAL REPORTING PHASE
 ▩ PROJECT INITIATION PHASE ■ POST ASAP EVALUATION PHASE (IF APPLICABLE)

FIGURE 2. ASAP SCHEDULES

CLIENT FLOW IN THE ASAP REHABILITATION SYSTEMS

As indicated previously, ASAP rehabilitation systems were designed to supplement the driver control functions of the police, courts, and licensing agencies in an integrated effort to reduce the likelihood that individuals apprehended, convicted, and punished for driving while intoxicated would repeat that behavior. While the traditional driver control agencies could hope to affect both the behavior of the individual arrested for DWI as well as the larger driving population who might react to the deterrent effect created by fear of arrest and consequences of arrest; rehabilitation programs were restricted to intervening in the lives of those individuals referred for alcohol related traffic offenses. The goal of this intervention was, of course, to modify the behavior of the individual in such a way that he would not subsequently drink to excess and then drive. A fundamental assumption of the ASAP rehabilitation countermeasure programs was that a large proportion of individuals arrested and convicted of DWI offenses were problem drinkers whose control over their drinking (and drinking/driving) behavior was limited. Beyond questions of the absolute effectiveness of rehabilitation programs in producing desired behavioral changes, it would appear essential that sufficient numbers of individuals be exposed to these countermeasures if they are to contribute any substantial impact to the reduction of alcohol related accidents or arrests within the general driving population. Figure 3 shows the annual numbers of drivers arrested for alcohol related traffic offenses, the number subjected to ASAP presentence investigations, and the number of these individuals referred to one or more rehabilitation countermeasures within the 35 projects.

Within most projects the presentence investigation (PSI) represented the primary liaison between the traffic courts and the project's rehabilitation countermeasure program. The PSI was intended to identify those individuals whose problems with drinking suggested the need for some form of rehabilitation, and to produce information which could be used to match a treatment program to the individual needs of each client. With few major exceptions actual entry into a project's rehabilitation system was unlikely for those individuals not subjected to the PSI (diagnostic and referral activities of the ASAPs are discussed in detail in Volume II of the present report). As shown in Figure 3,

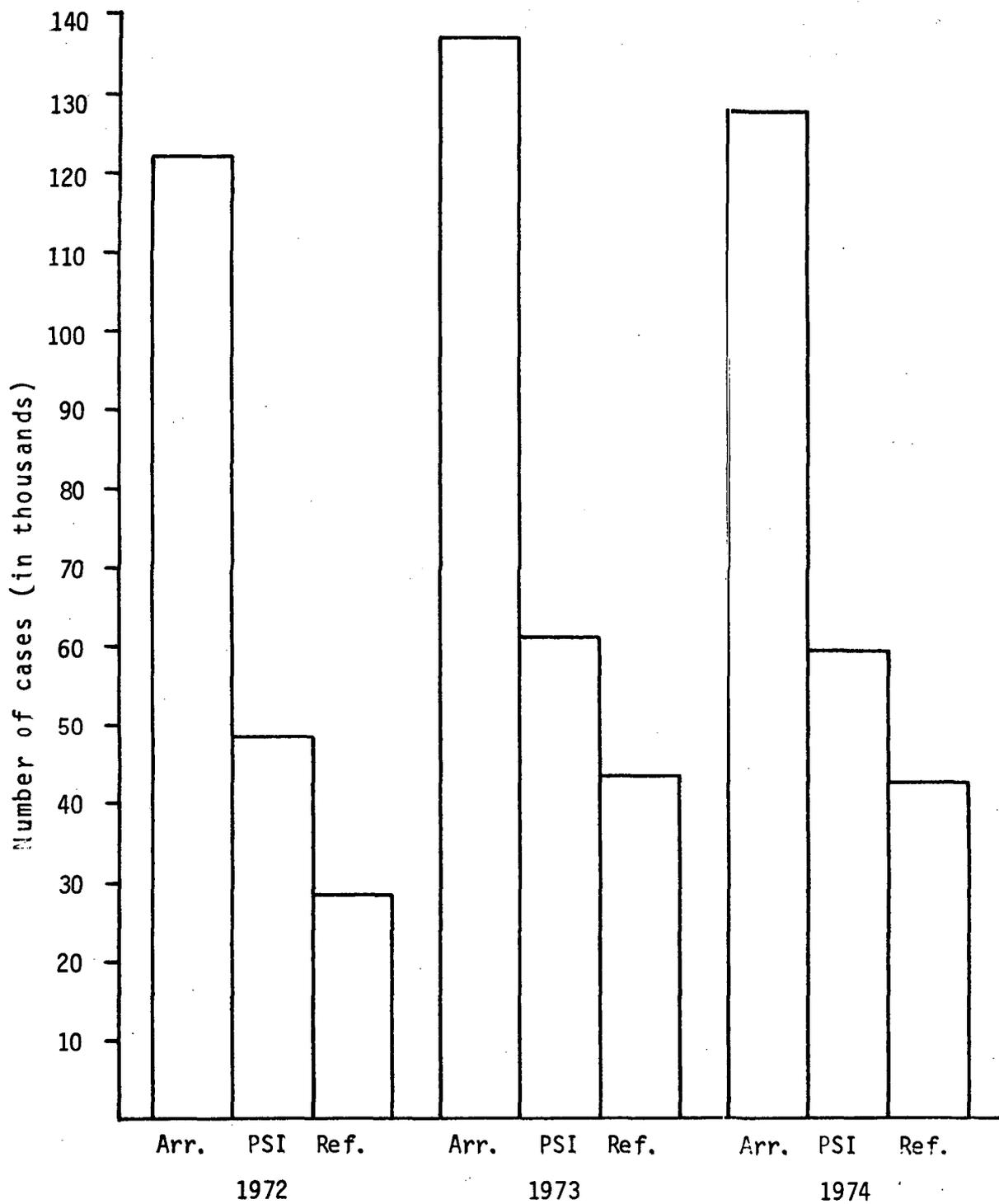


FIGURE 3. ANNUAL ARREST, PRESENTENCE INVESTIGATION AND REHABILITATION REFERRAL CASE VOLUMES REPORTED BY THE 35 ASAPs IN APPENDIX H - TABLES 10 AND 11.

PSIs were conducted for less than one-half of the individuals arrested for alcohol related traffic offenses in each operational year (40% in 1972, 44% in 1973, and 46% in 1974).

Figure 3 would suggest that once a presentence investigation is performed the probability of referral to some form of rehabilitation modality is substantial. Referrals were made for 59% of the PSIs conducted in 1972, 71% in 1973, and 71% in 1974. The mechanisms utilized to affect the referral of clients to rehabilitation programs varied substantially between projects. In some cases referral to a specific rehabilitation countermeasure was ordered by the court as a part of sentencing on the alcohol related traffic charge, or was specified as a condition of probation. In other cases a general sort of referral was made to the ASAP, which in turn specified the particular treatment modality (or modalities) to which the client would be exposed. Details of the various referral mechanisms used by each project are contained in Volumes I and II of the present report.

A substantial variety of alternative rehabilitation countermeasures were employed by the 35 ASAPs. Table 1 identifies the principal rehabilitation alternatives used by each of the projects.

With only three exceptions (Albuquerque, New Mexico; Denver, Colorado; and Seattle, Washington) every ASAP used an alcohol safety school as a rehabilitation modality. Ordinarily these schools were conducted, or at least coordinated, by the ASAPs themselves. As indicated in Table 1 some sites utilized the alcohol safety school as a re-education/rehabilitation modality for non-problem drinkers, others provided this treatment alternative for problem drinkers, and still other projects used schools as a modality for both problem and non-problem drinkers. Alcohol safety schools were, in general, short term (2-6 sessions), educationally oriented programs which were designed to handle a substantial number of DWI referrals. The school was frequently the only rehabilitation assignment for non-problem drinkers; while for problem drinkers schools were often used in combination with other treatment referrals.

In ten of the ASAPs, more intensive group therapy programs were developed and supported by the projects themselves. This treatment alternative was designed primarily for problem drinkers.

TABLE 1. GENERAL TYPES OF REHABILITATION MODALITIES AVAILABLE AT EACH ASAP

REGION	PROJECT CODE	ASAP SITE	ASAP-Sponsored Activity			
			Non-Problem Drinker Alcohol Safety School	Problem Drinker Alcohol Safety School	Mixed Drinker Type Alcohol Safety School	ASAP Group Therapy
I	2	Boston, MA			X	
	2	Maine		X		
	3	New Hampshire		X		
	1	Vermont			X	
II	1	Nassau Co., NY			X	
	4	Puerto Rico	X	X		X
III	2	Baltimore, MD			X	X
	4	Delaware		X		
	3	Fairfax Co., VA	X			
IV	1	Charlotte, NC	X		X	
	2	Columbus, GA			X	X
	2	Richland Co., SC	X			
	3	Tampa, FL			X	X
V	2	Cincinnati, OH	X	X		
	3	Hennepin Co., MN			X	
	2	Indianapolis, IN	X			
	1	Washtenaw Co., MI		X		X
	1	Wisconsin			X	
VI	1	Albuquerque, NM				
	3	New Orleans, LA			X	X
	3	Oklahoma City, OK			X	
	2	Pulaski Co., AR			X	
	3	San Antonio, TX	X			X
VII	3	Kansas City, MO	X	X		
	2	Lincoln, NE			X	X
	4	Sioux City, IA	X	X		
	2	Wichita, KS	X	X		
VIII	1	Denver, CO				
	4	Salt Lake City, UT			X	
IX	3	South Dakota	X	X		
	4	Los Angeles, CA	X	X		
	3	Phoenix, AR			X	X
X	4	Idaho	X			X
	1	Portland, OR	X			
	1	Seattle, WA				

PROJECT CODE: 1 = First Nine Sites; 2 = Second Twenty Sites Not Extended; 3 = Second Twenty Sites Extended; 4 = Last Six Sites

Continued on next page.

Table 1. General Types of Rehabilitation Modalities Available at Each ASAP (Continued)

REGION	PROJECT CODE	ASAP SITE	Community Resources						
			Other Group Therapy	Other Outpatient Treatment	Inpatient Treatment	Individual Counseling	Chemotherapy	Other Educational Modalities	Alcoholics Anonymous
I	2	Boston, MA	N	N		N	N		X
	2	Maine	X		X	X	X		X
	3	New Hampshire							
	1	Vermont	N	X(N)	X	N			
II	1	Nassau Co., NY							
	4	Puerto Rico	X				X		
III	2	Baltimore, MD				X	X	X	X
	4	Delaware	N			N		N	
	3	Fairfax Co., VA	X		X	X	X(N)	X	
IV	1	Charlotte, NC	X(N)			X			
	2	Columbus, GA	N	N	X(N)				
	2	Richland Co., SC	X(N)	X(N)	X	X(N)			
	3	Tampa, FL	X(N)	N	N			X	
V	2	Cincinnati, OH	X			X			X
	3	Hennepin Co., MN			X		X	X	X
	2	Indianapolis, IN	N	X		N		N	
	1	Washtenaw Co., MI					X	X	
	1	Wisconsin	X		X	X	X	X	X
VI	1	Albuquerque, NM			X		X	X	X
	3	New Orleans, LA	X(N)		X(N)	X	X		
	3	Oklahoma City, OK	X(N)		X	X	X	X	X
	2	Pulaski Co., AR					X	X	
	3	San Antonio, TX	N			N	N		
VII	3	Kansas City, MO	N			X	X(N)		
	2	Lincoln, NE			X	X	X		X
	4	Sioux City, IA							
	2	Wichita, KS	X(N)	N	X		X(N)	X(N)	X
VIII	1	Denver, CO	X	X(N)			X	X	
	4	Salt Lake City, UT	X		X	X			
	3	South Dakota	X		X	X	X		
IX	4	Los Angeles, CA					X	X	X
	3	Phoenix, AR	N			X	X	X	X
X	4	Idaho			X	X	X	X	
	1	Portland, OR	X(N)	X(N)	X(N)	X	X		
	1	Seattle, WA	X		X	X			

PROJECT CODE: 1 = First Nine Sites; 2 = Second Twenty Sites Not Extended; 3 = Second Twenty Sites Extended; 4 = Last Six Sites

N = NIAAA Sponsored Activity

X(N) = Treatment Provided by an NIAAA Affiliate

The primary source of alcohol rehabilitation services in most of the ASAP sites was, however, the existing rehabilitation system of the community. Most actual treatment referrals (as opposed to assignment to an alcohol safety school) were made to community treatment agencies which provided the types of rehabilitation modalities shown in Table 1. Most ASAP referrals involved outpatient treatment programs which utilized either group therapy or individual counseling procedures. Inpatient treatment, chemotherapy (primarily disulfiram), and referral to Alcoholics Anonymous were other treatment alternatives available to the projects. As indicated in Table 1, NIAAA sponsored treatment programs were used as treatment referral resources in a number of projects. A description of the rehabilitation modalities included in each project's rehabilitation system may be found in Volume I of the present report.

The nature of the rehabilitation referral made in a particular case was influenced substantially by the drinker diagnosis determined on the basis of the presentence investigation. Although a variety of diagnostic schemes was used by individual projects (see Volume II) for the present purpose, of accounting for caseload in the ASAP rehabilitation systems, the classifications derived from the NHTSA drinker classification criteria shown in Exhibit A will be used. The problem drinker (PD), non-problem drinker (NPD), and unidentified drinker (UI) categories were used by each site in the preparation of quarterly data reports to the NHTSA. Figure 4 shows the number of rehabilitation referrals reported by the 35 ASAPs for each year of the 1972-1974 period addressed by the present report. The data shown in this figure were obtained from the quarterly data tables ("Appendix H, Table 11") submitted by each site, and represent the number of clients referred to one or more rehabilitation modalities. Figures 5-7, on the other hand, (from "Appendix H, Table 14") show the number of rehabilitation program entries for each of the ASAP operational years, for problem drinkers, non-problem drinkers, and unidentified drinkers respectively. These tables also show the number of treatment completions reported by the 35 projects in each of the operational years. The discrepancy between the number of treatment entries and the number of completions is accounted for by individuals who dropped out of treatment prior to completion, and by the fact that many of the treatment

NHTSA DRINKER CLASSIFICATION CRITERIA

Problem Drinker - a drinker defined by any one of the following:

1. Diagnosis as an alcoholic by a competent medical or treatment facility, or
2. Self admission of Alcoholism or Problem Drinking, or
3. Two or more of the following:
 - a. A BAC of .15 percent or more at the time of arrest,
 - b. A record of one or more prior alcohol related arrests,
 - c. A record of previous alcohol related contacts with medical, social, or community agencies,
 - d. Reports of marital, employment, or social problems related to alcohol,
 - e. Diagnosis of problem drinker on the basis of approved structured written diagnostic interview instruments. Examples: (MAST, Mortimer-Filkins, NCA, and Johns Hopkins diagnostic tests).

Non-Problem Drinker - when decisions are made on the basis of a background investigation, anyone that is not classified as a problem drinker would be tabulated in this category. This includes those determined to be social drinkers.

Category Unidentified - after the investigation has been completed and no decision can be made to classify a person as a problem or non-problem drinker he should then be classified as Unidentified. This category should also be used by those ASAPs who make background investigations but do not make a decision on the basis of the investigation activity.

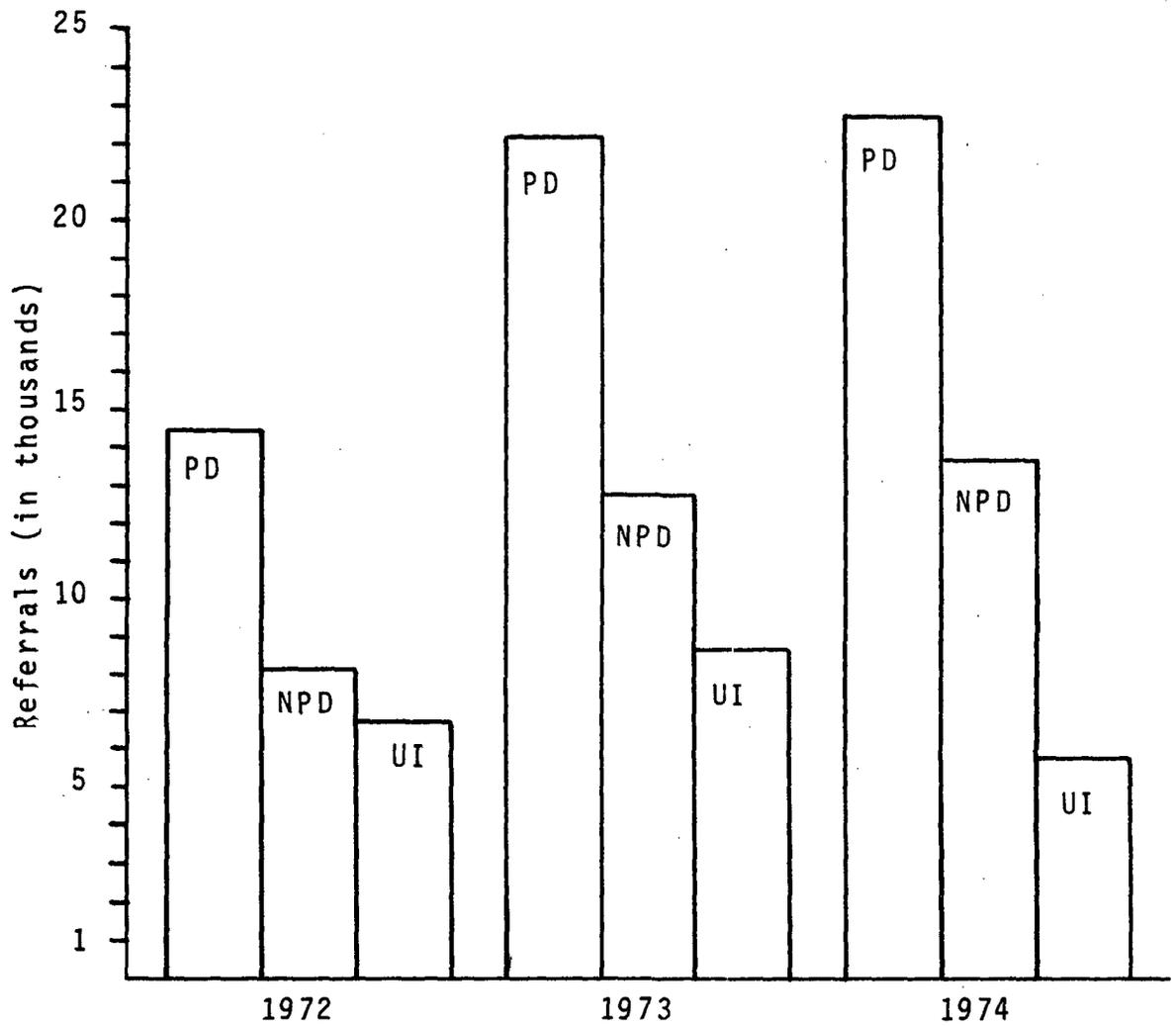


FIGURE 4. REHABILITATION REFERRALS FOR PROBLEM (PD), NON-PROBLEM (NPD) AND UNIDENTIFIED (UI) DRINKERS.

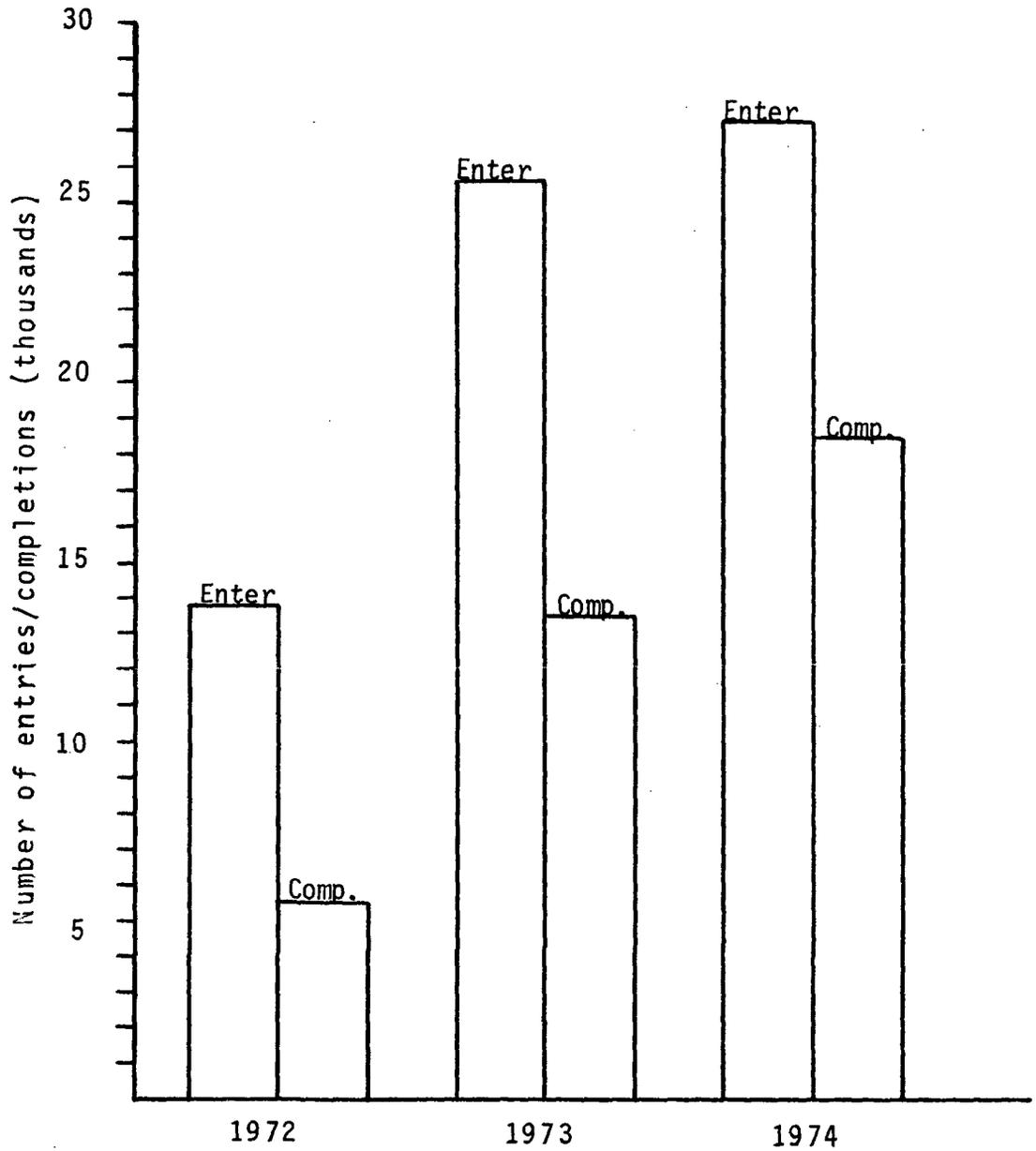


FIGURE 5. PROBLEM DRINKER REHABILITATION ENTRIES AND COMPLETIONS FOR THE 35 ASAPs.

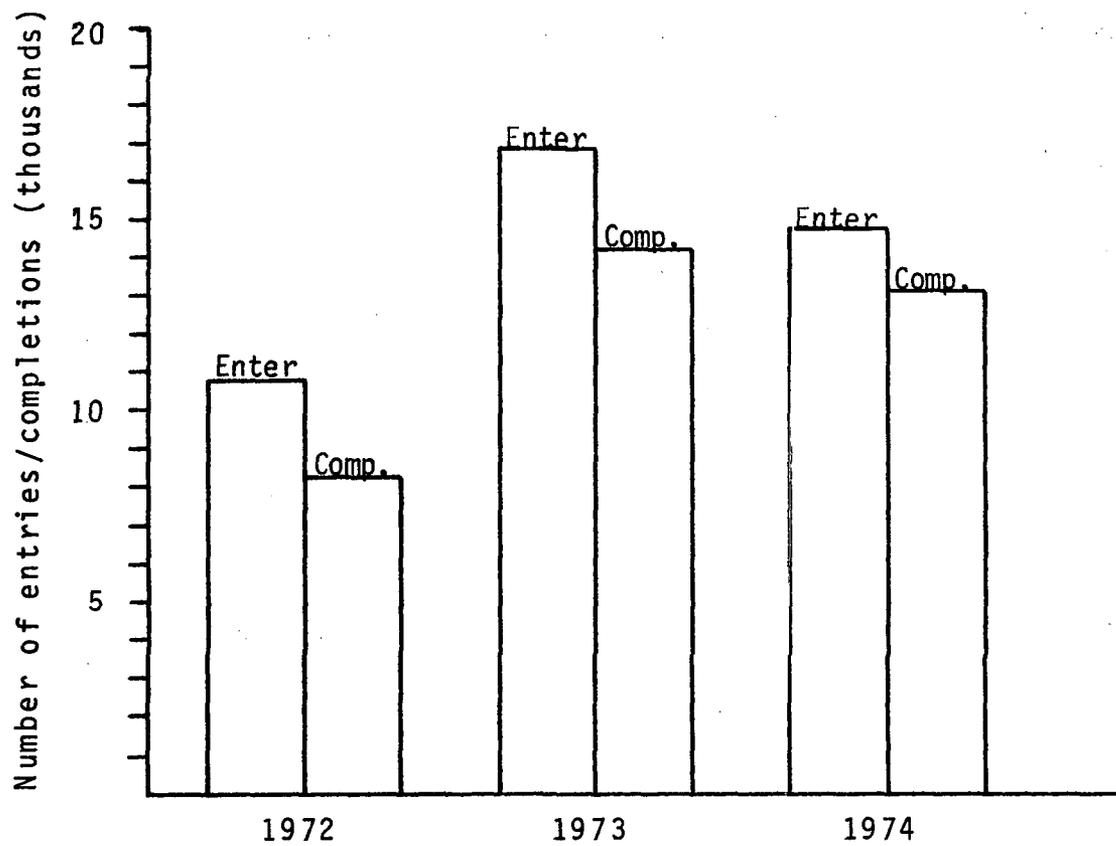


FIGURE 6. NON-PROBLEM DRINKER REHABILITATION ENTRIES AND COMPLETIONS FOR THE 35 ASAPs.

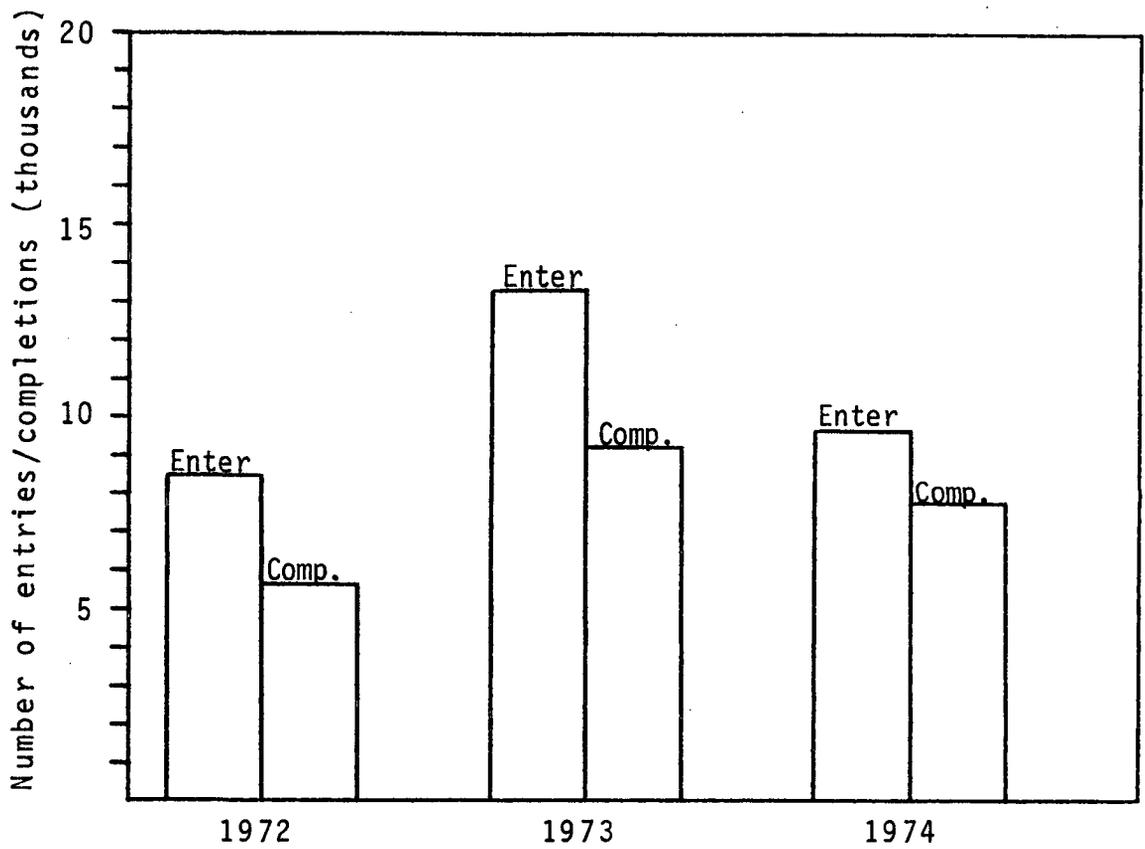


FIGURE 7. UNIDENTIFIED DRINKER REHABILITATION ENTRIES AND COMPLETIONS FOR THE 35 ASAPs.

programs were of sufficient duration that individuals entering in one year would not be recorded as having completed in the same calendar year. This was especially true of the longer term problem drinker treatment modalities.

Figure 8 shows entries and completions for the major problem drinker treatment modalities as reported by the 35 ASAPs in "Appendix H, Table 14." It is important to note in inspecting this table that the rehabilitation modalities listed do not represent mutually exclusive treatment referrals, and that in many instances the same individual would be counted as an entry to more than one modality. In every project, except Los Angeles, using chemotherapy as a modality, for example, clients were also concurrently referred to other treatment programs (usually group or individual therapy). Similarly, schools were frequently used in combination with more intensive forms of alcohol treatment. Despite this qualification, it is apparent from Figure 8 that alcohol schools were the most frequently utilized treatment countermeasure even for problem drinkers. Table 2 shows the approximate annual entries to each of these problem drinker treatment alternatives for each of the 35 ASAPs. Actual case volumes for each site are contained in Appendix A. Inspection of Table 2 indicates the relatively consistent use of alcohol schools for at least some of the problem drinkers referred to and entering an ASAP treatment program at most sites. Principle exceptions are the Puerto Rico, Baltimore, and Tampa projects which show no problem drinker alcohol safety school entries despite reasonably substantial (250-750 cases per year) entry to some form of treatment. Schools (either alone or in combination with other treatment) were a primary treatment alternative for a large number of the ASAPs. The pattern of use of other problem drinker treatment modalities is less uniform across projects.

Chemotherapy entries were reported by 20 of the 35 projects, but in 11 of these sites less than 100 clients entered annually. Chemotherapy represented a major rehabilitation alternative in only five projects (Washtenaw, Michigan; Pulaski County, Arkansas; Lincoln, Nebraska; Denver, Colorado; and Los Angeles, California).

Client entries to group therapy treatment programs were reported by nearly all (29) of the ASAPs but annual case volumes of 100 or more were reported by only 14 of these sites. The most substantial use of this treatment modality (annual entries of 250 or more) was

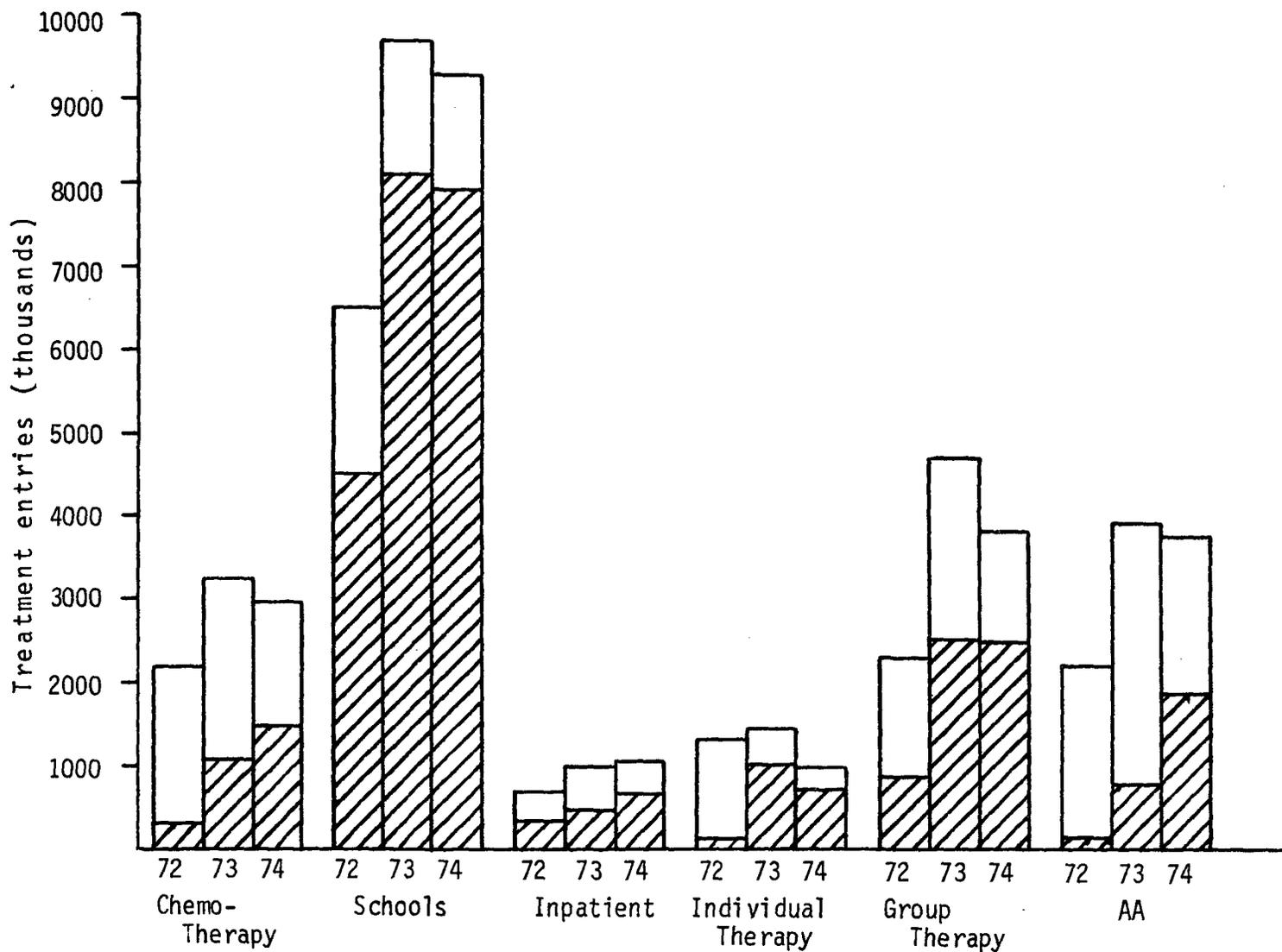


FIGURE 8. ENTRIES AND COMPLETIONS (SHADED AREAS) FOR THE MAJOR PROBLEM DRINKER REHABILITATION MODALITIES DURING THE 1972-1974 PERIOD. (35 ASAPs)

TABLE 2. APPROXIMATE ANNUAL CASE FLOW THROUGH THE MAJOR PROBLEM DRINKER TREATMENT MODALITIES BY INDIVIDUAL ASAPS.

REGION	ASAP SITE	Total	Alcohol Safety Schools	Chemotherapy	Group Therapy	Individual Therapy	Inpatient Treatment	AA
I	Boston, MA	3	3	0	1	1	1	1
	Maine	3	3	1	1	1	1	2
	New Hampshire	4	4	0	0	0	0	0
	Vermont	4	4	1	1	2	1	1
II	Nassau Co., NY	0	0	0	0	0	0	0
	Puerto Rico	3	0	0	3	0	0	0
III	Baltimore, MD	3	0	0	2	0	0	0
	Delaware	1	0	0	1	0	0	0
	Fairfax Co., VA	5	2	1	4	1	1	1
IV	Charlotte, NC	4	3	0	3	0	0	1
	Columbus, GA	3	3	1	1	0	1	0
	Richland Co., SC	2	1	1	1	1	1	1
	Tampa, FL	4	0	0	3	1	1	4
V	Cincinnati, OH	4	1	0	2	0	0	1
	Hennepin Co., MN	6	3	0	0	0	4	3
	Indianapolis, IN	5	1	0	1	1	0	0
	Washtenaw Co., MI	4	4	3	1	0	1	1
	Wisconsin	4	3	1	2	2	1	1
VI	Albuquerque, NM	6	6	2	1	1	1	1
	New Orleans, LA	3	3	2	3	1	1	1
	Oklahoma City, OK	4	2	1	2	0	1	2
	Pulaski Co., AR	6	3	4	2	0	0	1
	San Antonio, TX	4	3	0	1	0	0	0
VII	Kansas City, MO	6	3	2	1	2	0	2
	Lincoln, NE	4	2	3	2	3	1	2
	Sioux City, IA	2	2	1	1	1	1	1
	Wichita, KS	3	2	1	1	1	1	1
VIII	Denver, CO	6	1	3	4	1	1	1
	Salt Lake City, UT	5	3	1	1	1	1	2
	South Dakota	6	5	0	0	0	1	2
IX	Los Angeles, CA	6	3	6	2	2	1	5
	Phoenix, AR	4	4	1	1	1	1	1
X	Idaho	5	4	0	0	0	0	1
	Portland, OR	2	2	2	2	1	0	1
	Seattle, WA	2	0	0	0	0	2	0

0 = no entries

1 = less than 100 per year

2 = 100-249

3 = 250-499

4 = 500-749

5 = 750-999

6 = 1000 or more

reported by: Puerto Rico, Fairfax, Charlotte, Tampa, New Orleans, and Denver.

Individual therapy programs received ASAP referrals in 19 of the 35 projects, but only the Lincoln, Nebraska, project reported an annual case volume of 250 or more clients.

Inpatient treatment was at least occasionally used by 22 ASAPs, but constituted a major referral resource for only the Hennepin County, Minnesota, project.

Referral to Alcoholics Anonymous (AA) was reported for 26 of the 35 projects. This referral resource received a substantial number of entries in the Tampa, Hennepin County, and Los Angeles ASAPs.

Alcohol Safety Schools constituted the principle rehabilitation modality used for non-problem (NPD) and unidentified (UI) drinkers at the ASAPs. Table 3 shows approximate annual caseflow at each of the 35 ASAPs for these two drinker types. Detailed summaries of each site's annual number of entries, completions, and dropouts may be found in Appendix A.

REHABILITATION PROGRAM COSTS

A summary of the costs incurred by the 35 ASAPs in providing or coordinating the rehabilitation services described previously is contained in Figure 9. The \$5,346,502 expenditures (1972-1974 period) shown in this figure represents expenditures reported by the 35 ASAPs in quarterly "Appendix H, Table 12." Table 4 summarizes the total annual expenditures for each of the 35 projects. The rehabilitation expenditures reported in these tables do not represent the actual cost of the rehabilitative services received by the 140,540 ASAP rehabilitation program entries during the 1972-1974 period, but rather represent the costs incurred by the ASAPs in providing and coordinating rehabilitation program referrals. Although certain modalities such as alcohol safety schools and, in some cases, group therapy programs were funded by the ASAPs, the majority of the actual treatment provided to ASAP referred clients was supported by other agencies. In several of the projects funding by the NIAAA to community alcoholism treatment agencies represented a substantial proportion of the financial resources required to provide problem drinker rehabilitation programs. Unfortunately, a detailed accounting of

TABLE 3. APPROXIMATE ANNUAL CASE FLOW OF NON-PROBLEM AND UNIDENTIFIED DRINKERS THROUGH ALCOHOL SCHOOLS.

REGION	ASAP SITE	Non-Problem Drinkers		Unidentified Drinkers	
		Total	Alcohol Safety Schools	Total	Alcohol Safety Schools
I	Boston, MA	2	1	1	1
	Maine	1	1	1	1
	New Hampshire	0	0	0	0
	Vermont	3	3	1	1
II	Nassau Co., NY	2	2	6	6
	Puerto Rico	6	6	0	0
III	Baltimore, MD	1	0	1	0
	Delaware	1	0	1	0
	Fairfax Co., VA	6	6	5	2
IV	Charlotte, NC	3	3	3	3
	Columbus, GA	4	4	1	1
	Richland Co., SC	3	3	2	2
	Tampa, FL	1	0	6	6
V	Cincinnati, OH	4	3	1	1
	Hennepin Co., MN	3	3	2	1
	Indianapolis, IN	4	4	0	0
	Washtenaw Co., MI	3	3	1	1
	Wisconsin	2	2	0	0
VI	Albuquerque, NM	4	4	3	3
	New Orleans, LA	5	5	0	0
	Oklahoma City, OK	2	1	2	1
	Pulaski Co., AR	0	0	0	0
	San Antonio, TX	2	2	5	5
VII	Kansas City, MO	6	1	4	1
	Lincoln, NE	2	1	1	0
	Sioux City, IA	2	2	1	1
	Wichita, KS	1	1	1	1
VIII	Denver, CO	1	1	3	1
	Salt Lake City, UT	4	4	1	1
	South Dakota	2	2	0	0
IX	Los Angeles, CA	5	3	6	4
	Phoenix, AR	6	6	5	5
X	Idaho	5	4	4	4
	Portland, OR	5	5	1	1
	Seattle, WA	0	0	0	0

0 = no entries
 1 = less than 100 per year
 2 = 100-249
 3 = 250-499

4 = 500-749
 5 = 750-999
 6 = 1000 or more

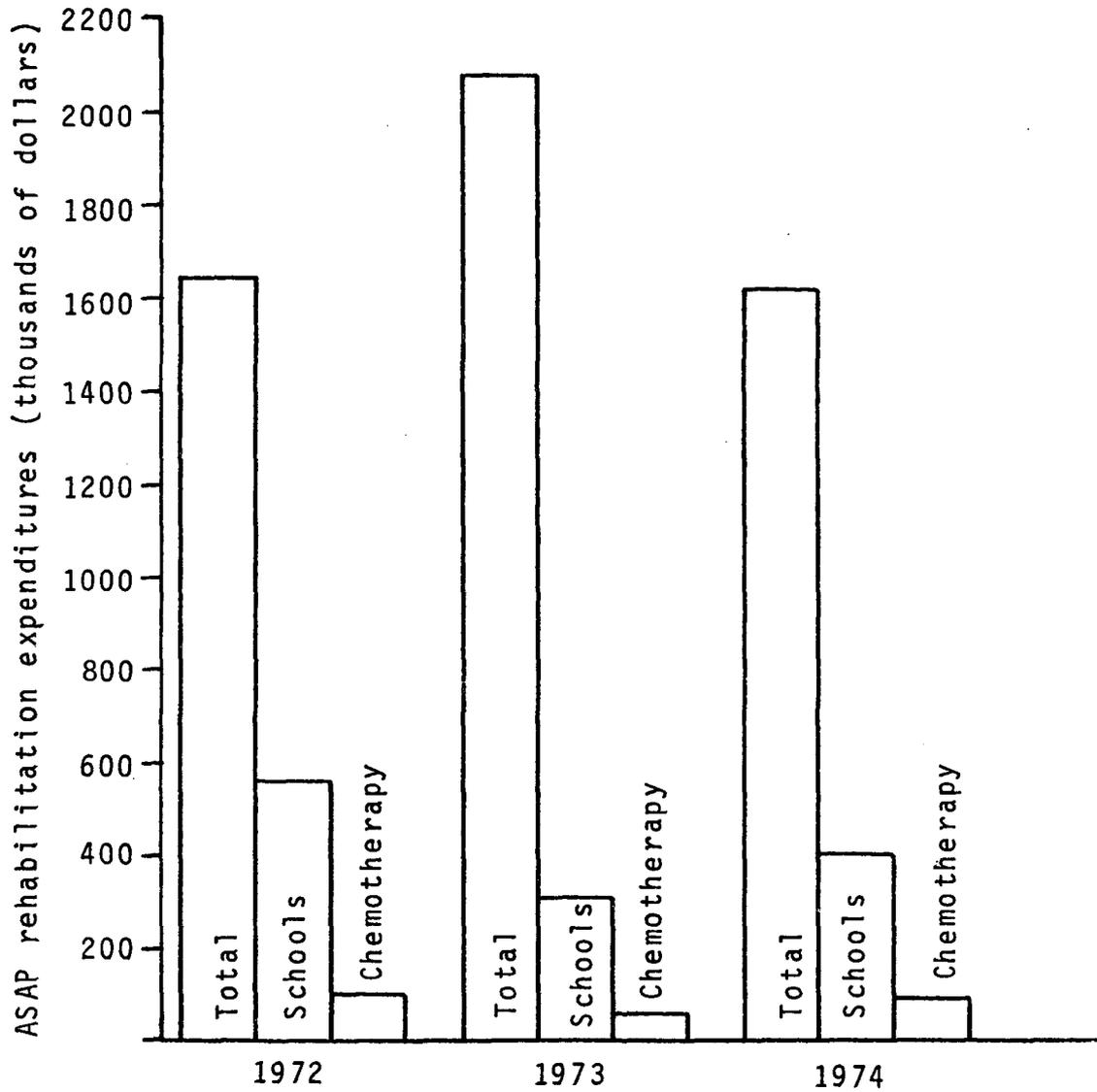


FIGURE 9. DIRECT ASAP EXPENDITURES FOR REHABILITATION SERVICES. (Source: Quarterly data tables - Appendix H Table 12)

TABLE 4. SUMMARY OF ANNUAL REHABILITATION COSTS 1972-1974
(FROM QUARTERLY DATA TABLES--APPENDIX H, TABLE 12).

REGION	ASAP SITE	1972	1973	1974	Total Operational Period
I	Boston, MA	34,846	24,327	31,325	90,498
	Maine	26,329	36,157	20,964	84,050
	New Hampshire	29,575	38,299	48,488	116,362
	Vermont	83,542	51,094	29,373	164,009
II	Nassau Co., NY	90,363	0	-	90,363
	Puerto Rico	0	19,398	83,523	102,921
III	Baltimore, MD	0	0	11,727	11,727
	Delaware	511	15,044	6,600	22,155
	Fairfax Co., VA	58,641	91,979	126,308	276,928
IV	Charlotte, NC	0	21,343	-	21,343
	Columbus, GA	13,080	22,998	11,775	47,853
	Richland Co., SC	65,860	266,478	73,724	406,062
	Tampa, FL	12,597	208,411	4,770	225,778
V	Cincinnati, OH	26,155	33,359	35,792	95,506
	Hennepin Co., MN	69,134	118,517	176,921	364,572
	Indianapolis, IN	10,418	20,720	21,714	52,852
	Washtenaw Co., MI	157,886	0	-	157,886
	Wisconsin	105,872	0	-	105,872
VI	Albuquerque, NM	98,962	88,588	-	187,550
	New Orleans, LA	25,399	40,925	58,899	135,223
	Oklahoma City, OK	8,649	4,351	6,779	20,279
	Pulaski Co., AR	17,654	36,392	42,310	96,356
	San Antonio, TX	11,900	31,567	50,415	93,882
VII	Kansas City, MO	143,632	169,336	57,062	370,030
	Lincoln, NE	75,935	96,328	105,017	276,380
	St. Louis City, IA	6,395	28,859	27,662	62,916
	Wichita, KS	79,151	46,191	67,267	192,609
VIII	Denver, CO	59,594	65,460	-	125,054
	Salt Lake City, UT	8,580	18,159	39,596	66,335
	South Dakota	2,561	365	0	3,326
IX	Los Angeles, CA	86,452	349,428	408,341	844,221
	Phoenix, AR	118,997	122,966	75,747	317,710
X	Idaho	27,529	10,665	0	38,194
	Portland, OR	79,700	0	-	79,700
	Seattle, WA	0	0	-	0
Total		1,645,599	2,078,404	1,622,099	5,346,502
\$ per entry		\$49.98	\$37.18	\$31.37	\$38.04

actual rehabilitation costs (apart from direct ASAP expenditures) was not included in the quarterly data reporting requirements established by the NHTSA.

As a consequence it is not now possible to document the actual economic requirements of the large scale drinking driver rehabilitation programs introduced by the ASAPs. The per entry costs shown in Table 4 (\$49.98 in 1972, \$37.18 in 1973, and \$38.04 in 1974) instead represent the average costs (summing across 35 projects) for arranging a treatment entry. Some of these costs were in fact incurred in providing treatment such as alcohol safety schools or ASAP sponsored group therapy programs. Other expenditures included in these totals represented costs of coordinating a treatment referral program and similar expenditures which did not directly purchase treatment services for particular clients.

Somewhat more precise reporting of rehabilitation expenditures was required with respect to alcohol safety schools and chemotherapy programs directly subsidized by the ASAPs. Table 5 summarizes the expenditures of the 35 projects for chemotherapy programs during the 1972-1974 period of project operations. Only nine projects (Washtenaw, Michigan; Wisconsin; Pulaski County, Arkansas; Kansas City, Missouri; Lincoln, Nebraska; Los Angeles, California; Phoenix, Arizona; Sioux City, Iowa; and Portland, Oregon) reported expenditures in support of disulfiram treatment programs. In most cases costs were incurred to provide for physical examinations to determine a client's suitability for this treatment program (although in some projects the client himself incurred this cost), and to pay for the actual administration of the drug over a period which typically exceeded six months treatment duration. At the program level per client costs of disulfiram treatment were \$52.34 in 1972, \$18.28 in 1973, and \$31.29 in 1974.

Table 6 shows project expenditures reported in "Appendix H, Table 12" for alcohol safety schools. While most projects reported the expenditure of funds to support this re-education/rehabilitation modality, the nature of these expenditures varied substantially between projects. In some ASAPs, project funds reimbursed the entire cost of this treatment modality. In other projects ASAP funds were used to subsidize part of the cost of conducting schools, with client fees used to provide the remaining revenues. In some projects the alcohol safety schools were essentially self supporting (after initial start-up costs). Average ASAP expenditures

TABLE 5. REHABILITATION FINANCIAL REPORT FOR CHEMOTHERAPY PROGRAMS -- SUMMARY OF THE 1972-1974 PERIOD.

REGION	ASAP SITE	1972		1973		1974		Total Rehab. Modality Cost
		Annual Cost	Cost per Client	Annual Cost	Cost per Client	Annual Cost	Cost per Client	
I	Boston, MA	0	-	0	0	0	0	0
	Maine	0	-	0	0	0	0	0
	New Hampshire	0	-	0	0	0	0	0
II	Vermont	0	-	0	0	0	0	0
	Nassau Co., NY	0	-	0	0	-	-	0
	Puerto Rico	0	-	0	0	0	0	0
III	Baltimore, MD	0	-	0	0	0	0	0
	Delaware	0	-	0	0	0	0	0
	Fairfax Co., VA	0	-	0	0	0	0	0
IV	Charlotte, NC	0	-	0	0	-	-	0
	Columbus, GA	0	-	0	0	0	0	0
	Richland Co., SC	0	-	0	0	0	0	0
V	Tampa, FL	0	-	0	0	0	0	0
	Cincinnati, OH	0	-	0	0	0	0	0
	Hennepin Co., MN	0	-	0	0	0	0	0
VI	Indianapolis, IN	0	-	0	0	0	0	0
	Washtenaw Co., MI	61,081	178.60	0	0	-	-	61,081
	Wisconsin	275	55.00	0	0	-	-	275
VII	Albuquerque, NM	0	0	0	0	-	-	0
	New Orleans, LA	0	0	0	0	0	0	0
	Oklahoma City, OK	0	0	0	0	0	0	0
VIII	Pulaski Co., AR	5,757	6.68	9,743	16.18	10,849	20.90	26,349
	San Antonio, TX	0	0	0	0	0	0	0
	Kansas City, MO	4,860	61.52	14,555	65.27	12,773	30.55	32,188
IX	Lincoln, NE	28,264	113.97	18,019	51.78	11,322	51.46	57,605
	Sioux City, IA	33	33.90	908	41.27	842	49.53	1,783
	Wichita, KS	0	0	0	0	0	0	0
X	Denver, CO	0	0	0	0	-	-	0
	Salt Lake City, UT	0	0	0	0	0	0	0
	South Dakota	0	0	0	0	0	0	0
Total	Los Angeles, CA	2,866	86.85	16,028	14.02	57,236	39.45	76,130
	Phoenix, AR	102	17.67	0	0	0	0	102
	Idaho	0	0	0	0	0	0	0
Total	Portland, OR	10,600	97.25	0	0	-	-	10,600
	Seattle, WA	0	0	0	0	-	-	0
	Total	113,838	52.34	59,253	18.28	93,022	31.29	266,113

TABLE 6. REHABILITATION FINANCIAL REPORT FOR ALCOHOL SAFETY SCHOOLS--SUMMARY OF 1972-1974 PERIOD.

REGION	ASAP SITE	1972		1973		1974		TOTAL
		Annual Cost	Cost per Client	Annual Cost	Cost per Client	Annual Cost	Cost per Client	Rehabilitation Modality Cost
I	Boston, MA	892	7.82	23520	30.66	31325	34.80	55737
	Maine	4735	36.99	14765	57.23	13490	17.80	32990
	New Hampshire	23520	115.34	28827	51.48	38114	38.70	90471
	Vermont	83542	188.16	51094	71.96	29373	19.31	164009
II	Nassau Co., NY	90363	74.01	0	0	-	-	90363
	Puerto Rico	0	0	0	0	0	0	0
III	Baltimore, MD	0	0	0	0	11727	0	11727
	Delaware	0	0	0	0	0	0	0
	Fairfax Co., VA	13545	14.36	9327	4.21	4460	3.44	27332
IV	Charlotte, NC	0	0	21343	16.52	0	0	21343
	Columbus, GA	13080	13.04	22998	22.50	11775	20.99	47853
	Richland Co., SC	17524	125.17	77286	96.01	18237	18.48	113047
	Tampa, FL	16552	5.16	2670	0.62	1100	0.28	20322
V	Cincinnati, OH	6145	13.24	5553	8.34	5295	11.44	16993
	Hennepin Co., MN	41300	98.00	57971	66.25	49400	62.70	148671
	Indianapolis, IN	10418	28.46	20720	24.35	21714	33.20	52852
	Washtenaw Co., MI	75641	96.11	0	0	-	0	75641
	Wisconsin	3340	5.55	0	0	-	0	3340
VI	Albuquerque, NM	0	0	0	0	-	0	0
	New Orleans, LA	759	0.79	0	0	0	0	759
	Oklahoma City, OK	8649	58.05	4851	14.14	6779	32.91	20279
	Pulaski Co., AR	11897	42.64	21313	49.56	15473	54.87	48683
	San Antonio, TX	8894	14.37	7111	4.97	7464	4.39	23469
VII	Kansas City, MO	21318	71.30	32733	80.62	32024	66.58	86075
	Lincoln, NE	7924	31.55	9445	18.82	10043	53.42	27415
	Stoux City, IA	1886	42.86	1011	3.45	0	0	2897
	Wichita, KS	9303	53.16	6604	14.42	7141	32.02	23048
VIII	Denver, CO	0	0	0	0	-	0	0
	Salt Lake City, UT	7780	12.37	16561	14.12	38563	26.34	62904
IX	South Dakota	2068	3.01	0	0	0	0	2068
	Los Angeles, CA	29094	232.75	68809	74.95	54357	43.45	152260
	Phoenix, AR	0	0	0	0	0	0	0
X	Idaho	27529	77.11	10665	6.43	0	0	38194
	Portland, OR	24100	18.73	0	0	-	0	24100
	Seattle, WA	0	0	0	0	0	0	0
Total		561808	23.77	515180	15.77	407854	15.41	1484842/17.94

for alcohol safety schools (for PDs, NPDs, and UIs combined) were \$23.77 in 1972, \$15.77 in 1973, and \$15.41 in 1974.

RETENTION OF CLIENTS IN ASAP TREATMENT PROGRAMS

It was suggested earlier that a project's capacity to expose a reasonable number of clients to treatment programs was a necessary prerequisite to those programs showing an impact on traffic safety criteria such as recidivism. It seems equally logical to suppose that the capacity of the ASAP rehabilitation systems to retain clients in treatment programs will have a similar influence on the measured effectiveness of these programs.

Figure 10 shows the dropout rates for the major problem drinker treatment modalities as reported by the 35 ASAPs in quarterly data tables ("Appendix H, Table 14"). Before commenting on the relative capacity of these modalities to retain clients assigned to them, it is important to note that the data upon which these rates are based provide, at best, a gross estimate of client loss in the ASAP treatment programs. "Appendix H, Table 14" did not provide for the recording of restarts in a treatment program subsequent to a client's initial dropout from that program, nor was provision made for recording (or discriminating) multiple dropouts from a particular program. Beyond the mechanical problems attendant to the reporting of client attendance at scheduled treatment programs, a significant amount of variability was apparent between projects relative to the quality and comprehensiveness of the client tracking systems used to identify clients who completed or dropped out of treatment. In some cases projects found it difficult, if not impossible, to obtain client status information from community treatment agencies. Perhaps the most extreme example of this reporting problem occurred in connection with referrals to Alcoholics Anonymous as a treatment alternative. In many sites it was considered a breach of the basic premises of this organization to request reports of client status after referral. In other sites excellent tracking systems were operated and close contact was maintained throughout the course of a client's treatment program.

With these qualifications in mind, the overall dropout rate for problem drinker treatment entries was

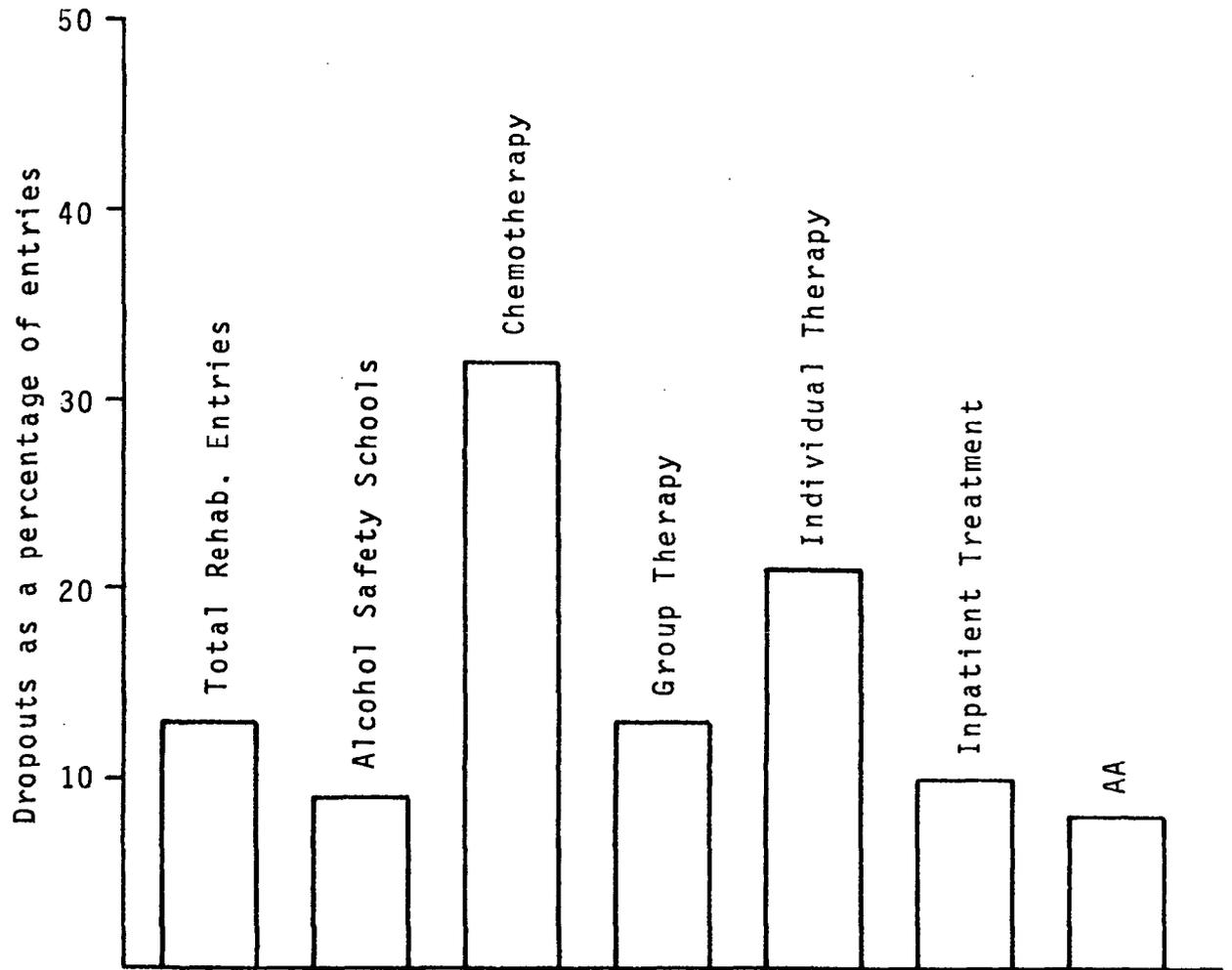


FIGURE 10. RELATIVE DROPOUT RATES FOR THE MAJOR PROBLEM DRINKER REHABILITATION MODALITIES.

approximately 13% during the 1972-1974 period covered by the present report. The most extreme rate (32%) was recorded for chemotherapy programs, while the lowest rates were recorded for alcohol safety schools (9%), inpatient treatment (10%), and AA (8%). Table 7 shows the dropout rates reported for these problem drinker modalities by each of the 35 ASAPs, and provides an indication of the between project variability in client retention.

Table 8 summarizes dropout rates for problem drinkers and unidentified drinkers both for total treatment entries and for alcohol safety schools (frequently the only treatment modality used for these drinker types). It is interesting to note that the dropout rates for alcohol safety schools are essentially equivalent between the three NHTSA drinker types (9% for problem drinkers, 9% for non-problem drinkers, and 10% for unidentified drinkers).

TABLE 7. DROPOUT RATES FOR MAJOR PROBLEM DRINKER TREATMENT MODALITIES. CELL ENTRIES REFLECT DROPOUTS AS A PERCENTAGE OF TREATMENT ENTRIES DURING THE 1972-1974 PERIOD. (SOURCE APPENDIX H, TABLE 14 DATA.)

REGION	ASAP SITE	Total	Alcohol Safety Schools	Chemotherapy	Group Therapy	Individual Therapy	Inpatient Treatment	AA
I	Boston, MA	10	9	-	8	0	0	18
	Maine	18	9	8	22	6	10	25
	New Hampshire	19	19	-	-	-	-	-
	Vermont	7	2	21	13	14	7	17
II	Nassau Co., NY	-	-	-	-	-	-	-
	Puerto Rico	1	-	-	1	-	-	-
III	Baltimore, MD	8	-	-	5	-	-	-
	Delaware	5	-	-	5	0	-	-
	Fairfax Co., VA	8	16	6	5	10	0	0
IV	Charlotte, NC	11	6	-	18	-	-	0
	Columbus, GA	13	10	13	22	-	24	-
	Richland Co., SC	19	8	0	15	31	27	33
	Tampa, FL	12	-	-	21	34	6	0
V	Cincinnati, OH	9	24	-	21	-	-	0
	Hennepin Co., MN	6	3	-	-	-	9	8
	Indianapolis, IN	3	0	-	0	1	-	-
	Washtenaw Co., MI	0	0	0	27	-	0	0
	Wisconsin	9	13	20	14	2	0	13
VI	Albuquerque, NM	4	4	17	6	15	16	9
	New Orleans, LA	3	0	4	2	0	31	25
	Oklahoma City, OK	6	3	79	7	-	0	5
	Pulaski Co., AR	39	25	52	10	-	-	0
	San Antonio, TX	5	0	-	67	-	-	-
VII	Kansas City, MO	11	10	25	0	8	-	0
	Lincoln, NE	39	4	27	22	44	19	26
	Sioux City, IA	7	7	38	50	0	0	0
	Wichita, KS	20	15	70	32	14	15	17
VIII	Denver, CO	17	23	20	15	6	20	14
	Salt Lake City, UT	4	5	0	8	5	2	4
	South Dakota	4	5	-	-	-	1	0
IX	Los Angeles, CA	27	11	38	31	31	5	10
	Phoenix, AR	25	27	0	10	35	0	36
X	Idaho	2	2	-	-	-	-	0
	Portland, OR	22	5	19	14	8	0	8
	Seattle, WA	18	-	-	-	-	18	-
	Across Projects	13	9	32	13	21	10	8

TABLE 8. DROPOUT RATES FOR NON-PROBLEM AND UNIDENTIFIED DRINKERS. CELL ENTRIES REFLECT DROPOUTS AS A PERCENTAGE OF TREATMENT ENTRIES DURING THE 1972-1974 PERIOD (SOURCE APPENDIX H, TABLE 14).

REGION	ASAP SITE	Non-Problem Drinkers		Unidentified Drinkers	
		Total	Schools	Total	Schools
I	Boston, MA	7	8	19	19
	Maine	0	0	11	7
	New Hampshire	-	-	-	-
	Vermont	2	1	49	52
II	Nassau Co., NY	12	12	24	24
	Puerto Rico	0	0	-	-
III	Baltimore, MD	6	-	14	-
	Delaware	0	-	0	-
	Fairfax Co., VA	9	8	16	15
IV	Charlotte, NC	4	3	7	7
	Columbus, GA	17	17	18	15
	Richland Co., SC	5	4	4	2
	Tampa, FL	11	-	11	11
V	Cincinnati, OH	8	7	13	9
	Hennepin Co., MN	2	1	5	3
	Indianapolis, IN	11	12	0	-
	Washtenaw Co., MI	0	0	2	0
	Wisconsin	1	0	-	-
VI	Albuquerque, NM	3	3	4	4
	New Orleans, LA	1	1	-	-
	Oklahoma City, OK	2	7	3	3
	Pulaski Co., AR	-	-	-	-
	San Antonio, TX	0	0	0	0
VII	Kansas City, MO	3	9	8	9
	Lincoln, NE	36	3	0	-
	Sioux City, IA	4	4	9	17
	Wichita, KS	13	13	21	23
VIII	Denver, CO	14	7	14	5
	Salt Lake City, UT	3	3	0	0
	South Dakota	2	2	-	-
IX	Los Angeles, CA	9	5	10	4
	Phoenix, AR	21	22	23	23
X	Idaho	1	1	1	2
	Portland, OR	7	7	11	11
	Seattle, WA	-	-	-	-
Across Projects		8	9	11	10

ANALYSES OF REHABILITATION EFFECTIVENESS

Attempts to empirically assess the effectiveness of ASAP drinking driver rehabilitation programs have been a major concern of evaluators at both the project and program level. The primary success criterion which has been used in these evaluation studies has been arrest recidivism, although some studies have utilized subsequent crash involvement of ASAP treatment referrals as a measure of program success. The choice of arrest or crash recidivism as indices of program effectiveness represents a logical extension of the traffic safety objectives formulated for the ASAPS--the reduction of alcohol related traffic crashes. It should be noted, however, that this choice of criteria necessarily restricts assessments of ASAP rehabilitation effectiveness to the measurement of behavioral change in a relatively small proportion of the problem drinker's life situation. As pointed out in a recent NHTSA report,¹² this choice of criteria, although defensible from a traffic safety program viewpoint, may substantially reduce the probability of obtaining measurable success.

Project level assessments of rehabilitation program effectiveness have been reported annually in Analytic Study No. 6 (An Analysis of Alcohol Rehabilitation Efforts) prepared in accordance with NHTSA guidelines which are shown in Exhibit B. The purpose of this NHTSA reporting requirement was to provide for detailed and comprehensive analyses of ASAP rehabilitation system effectiveness which were tailored to unique characteristics of each site. At the program level the principal mechanism for assessing rehabilitation effectiveness was provided through the annual recidivism tables ("Appendix H, Table 15") required from each site. The format of this data reporting mechanism is shown in Exhibit C. The "Table 15" data report provided for the recording of the number of clients entering each of the site's rehabilitation modalities during each quarter of the sites' operational period. Recidivism from each of these modalities or modality combinations was recorded as the number of individuals who were rearrested for alcohol related traffic offenses in each quarter subsequent to the quarter of their entry into the rehabilitation system. Each site was to complete this annual data report

¹² NHTSA, op. cit., p. 5.

Guidelines for Key Analytic Studies

6. An Analysis of Alcohol Rehabilitation Efforts.

This study includes an analysis of the characteristics and effectiveness of your overall rehabilitation system as well as the most frequently used treatment modalities (or combinations of modalities). Table 1 provides a summary of the most frequently used modalities at the various project sites in 1972 and thus provides a guideline as to which modalities should be considered for evaluation at each site. If these guidelines are followed, each of the basic modalities will receive analytic attention in at least five projects, thus lending some confidence to the findings.

A. What are the Characteristics of Your Rehabilitation System.

This study should include a description of the pertinent characteristics of the overall rehabilitation system and each of the modalities (or combinations of modalities) being evaluated. With regard to the total system description, information should be supplied concerning (1) the total system flow through the system for 1973; (2) criteria for and methods of assigning persons to the system;* (3) court incentives to encourage participation in the system; (4) follow-up mechanisms for ensuring compliance with participation requirements (5) the interaction of ASAP components with community treatment resources and with the courts and (6) which part of the total system (modalities or combinations of modalities) have been selected for evaluative analysis and why.

With regard to the individual modality descriptions, information should be provided concerning (1) the objectives of the modality; (2) target populations and (3) the mechanisms and operating characteristics of the modality including number of sessions, duration of sessions, instructor or therapist qualification, etc. For single treatment modalities much of the numerical portion of these descriptions can be provided in the form illustrated in Table 2 thus leaving only qualitative information for narrative description. Tables for each appropriate modality should be completed and returned with the analytic study. Demographic data for each modality should be included if it is available, but need not be specially collected.

*If this duplicates any effort from Analytic Study No. 5 merely include the same material in both studies.

B. How Effective is Your Rehabilitation?

Rehabilitation is unique in the respect that it is perhaps the only countermeasure area where exposure to the countermeasure can be provided to some persons and withheld from others thus enabling relatively unconfounded evaluation.

Criteria which should be considered with regard to establishing the effectiveness of the rehabilitation area are as follows:

Not A/R → crash involvement but total crash involvement -- If you have both that's OK.

****1. Crash Involvement:** Certainly the single most important measure of the effectiveness of rehabilitation systems or modalities is that they significantly reduce subsequent crash involvement among those who participate in such programs.

While in Table 15 recidivism is defined solely in terms of a re-arrest for an A/R offense following entry into rehabilitation (or subsequent to the initial conviction for non-treatment groups), it is requested that in this Analytic Study considerable emphasis be placed on subsequent crash involvement as well as re-arrest for A/R offenses in determining the effectiveness of rehabilitation efforts. This, of course, is the purpose of traffic safety countermeasures in the first place. Unfortunately, much of the existing literature in this area indicates that while rehabilitation/re-education programs can be effective in reducing arrest recidivism, few of such programs have documented reductions in crash involvement recidivism. Therefore, it is requested that wherever crash information is available (as it is in virtually all State Motor Vehicle Department files) that an assessment of the effectiveness of rehabilitation in reducing crash involvement be performed.

****2. Re-Arrest for A/R Offenses:** The second most important index of rehabilitation countermeasure effectiveness is arrest recidivism. The overall rehabilitation system and each modality should be evaluated with regard to this measure.

Note this comment →

Some of the primary deficiencies of the 1972 efforts in this area were the lack of no-treatment control groups and the failure to control for differences between groups with regard to variables such as prior arrest records and follow-up exposure time. Since these deficiencies rendered the findings of the 1972 studies relatively useless, it is requested that every effort be made to control for such differences.

****Most important from OAC point of view.**

In addition, it is requested that differences between ~~groups~~ relative to drinker types be controlled for if appropriate data is available. It should at least be possible to assess recidivism rates for different drinker types by summoning across modalities.

Unlike Table 15 guidelines, it is not suggested that everyone who entered each particular modality be included in your analytic comparisons. Care should be exercised, however, to ensure that each modality group includes an unbiased sample of the participants of the group and that the size of the sample is large enough to permit statistical tests to be conducted.

NOTE: In Table 15, data which must later be combined and analyzed is being submitted to OAC. For this reason, standardization of the data is essential, and it has been requested that recidivism (in terms of re-arrest for an A/R offense) be tabulated primarily for persons entering treatment. In Analytic Study #6 standardization is somewhat less important since OAC will be receiving completed analyses. Thus, recidivism in this study (in terms of crash involvement or re-arrest) can be assessed for persons entering or completing rehabilitation, as the evaluator desires.

****3. Intermediate Variables:** If information is available with regard to effectiveness of the rehabilitation system or individual modalities in terms of changing drinking habits, life situations, or personality variables or in terms of encouraging persons to enter long term rehabilitation programs, it would be highly desirable to document and report such changes to OAC. It is important that we get as complete a picture as possible with regard to the relationship between such changes and ultimate changes in recidivism and crash involvement. Plotting recidivism as a function of time after index arrest or after entry into rehabilitation will also aid in establishing this relationship.

4. Knowledge and Attitude Changes: Changes in participants' knowledge and attitude may serve as basis for an indirect evaluation of rehabilitation effectiveness. However, since the relationships between such measures and subsequent changes in recidivism and/or crash involvement are tenuous, analyses of such changes need be included only if the evaluator chooses to do so.

****5. Profile Comparisons:** Participants in various rehabilitation programs can be compared along a number of dimensions such as age, drinker type, social economic status, educational level, sex and race. Such comparisons are important in attempting to account for the effectiveness of various countermeasure techniques and especially in comparing the effectiveness of various treatment modalities.

There are two types of profile comparisons that appear to be most important from an evaluation standpoint. These include profile comparisons of (1) individuals completing rehabilitation programs versus those dropping such programs and (2) recidivists versus non-recidivists within various treatment modalities (or) within various drinker types.

Where possible it would be desirable to have these profile comparisons conducted. Such profiles need not be exclusively descriptive tabulation since statistical procedures exist to test the equivalence of group profiles. However, any information which can be provided in this area would be extremely useful in examining phenomena such as the concept of "treatability".

6. Cost and Efficiency Variables: Although perhaps not amenable to vigorous statistical analysis, a descriptive analysis of the costs of rehabilitation efforts should be provided. This analysis should identify dollar costs for each countermeasure and efficiency indices such as manhours and costs per person processed (entered and/or completed).

7. Catalytic Effect: Although precise quantification of catalytic effects may be difficult or impossible to achieve, a descriptive account of the effects of ASAP rehabilitation efforts on the judicial system law enforcement system and community rehabilitation resources would be desirable. To what extent have ASAP rehabilitation countermeasures contributed to development of new resources or resulted in the expansion of existing resources? To what extent have these efforts burdened existing resources or interacted with other ASAP and non-ASAP systems?

****Most important from OAC point of view.**

A SUMMARY OF PROPOSED ANALYTIC STUDY #6 CONTENT

I. Suggested Comparisons to be made.

- A. Comparison between modalities and no-treatment control group. (e.g., School vs. Group Therapy vs. Chemo Therapy vs. School Group Therapy vs. AA vs. No-treatment)
- B. Comparison of overall treatment group vs. Non-treatment group.
- C. Comparison of persons entering vs. those completing vs. dropping rehabilitation (for a particular treatment modality).
- D. Comparison of Recidivists vs. Non-recidivists with regard to demographic and other characteristics.
- E. Comparisons unique to the project

(e.g., 1 session vs. 4 session courses; paid vs. non-paid rehabilitation, etc.)

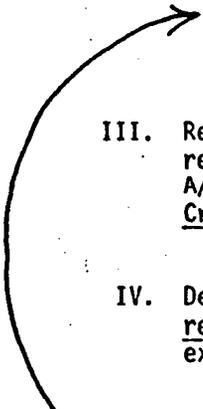
II. Variables to be controlled or accounted for:

- A. Prior Arrest Records
- B. Drinker Types (if data is available)
- C. Follow-up exposure periods

At least in a statistical sense

III. Recidivism may be compared for those entering or completing rehabilitation but should be defined in terms of re-arrests for A/R offenses unless re-conviction data is all that is available. Crash involvement should be examined if at all possible.

IV. Dependent variables include subsequent crash involvement, arrest recidivism rates or time to re-arrest. Prior records should be examined for 3 years prior to index arrest-where possible.



Include Comparison Table!!!

Recid. Par.	TREATMENT COMBINATION				
	A	B	C	D	E
P ₁	n/7.	n/7.	n/7.	n/7.	n/7.
P ₂	n/7.	n/7.	n/7.	n/7.	n/7.
P ₃	n/7.	n/7.	n/7.	n/7.	n/7.

Control/Comparison group

Like Analysis of Covariance - this analysis will add meaning to raw recidivism rates

Then start detailed analysis

INDIVIDUAL TREATMENT MODALITY SUMMARY TABLE

(to be completed for each treatment modality used; provide data which is available)

1. Average Length of program*
 No. sessions _____
 No. hrs. per session _____
2. Size of sessions
 No. of Students/Clients per session _____
 No. programs per year _____
3. Cost of program
 Cost per program _____
 Therapist/Instructors fees _____
 Cost to Students/Clients _____
 Who sponsors program
 ASAP? _____
 Other (name) _____
4. Total number of Students/Clients to date this year. _____
 Average No. of Students/Clients entering per month. _____
5. Percent of Students/Clients who have sought further help from treatment agencies (referrals). _____
6. Distribution of Students/Clients by age.

	<u>number</u>	<u>% of total</u>
15-19	_____	_____
20-24	_____	_____
25-29	_____	_____
30-34	_____	_____
35-39	_____	_____
40-44	_____	_____
45-49	_____	_____
50-54	_____	_____
55-59	_____	_____
60-64	_____	_____
65 & over	_____	_____

7. Distribution of Students/Clients by drinking classification

	<u>number</u>	<u>% of total</u>
Problem drinkers	_____	_____
Non-Problem	_____	_____
Other (designate)	_____	_____

8. Distribution by sex race

	<u>male</u>	<u>female</u>
Whites	_____	_____
Blacks	_____	_____
Other	_____	_____

* "Program" refers to the typical time period and/or number of sessions which a client would be referred or assigned to in this modality.

A PROPOSED FORMAT FOR ANALYTIC STUDY #6

Note: There have been some conflicting statements made with regard to the specification of format for conducting analytic studies. On the one hand some evaluators have complained that format requirements restrict them in their analytic endeavors, others have complained that OAC is not specific enough in defining the requirements of analytic studies. As a result, the following table represents a suggested format for Analytic Study #6. It need not be followed if it in any way restricts the analytic plan of the evaluators.

I. Introduction:

- A. Description of Rehabilitation System/Modalities
- B. Objectives of this Analytic Study
- C. Review of Pertinent Literature

II. Methods of Procedure:

A short methods section to describe the measure used and to identify and describe the experimental or quasi-experimental designs and analytic procedures.

III. Results and Discussion:

A. Rehabilitation System/Modality Effectiveness

- *1. Recidivism measures (crash involvement and/or re-arrest)
 - *a. Modality comparisons
 - *b. Treatment vs. Non-treatment
 - *c. Entry vs. completions vs. Drops
 - d. Project Specific Comparisons
- *2. Intermediate measures.
- 3. Knowledge/Attitude measures.
- 4. Profile comparisons
 - a. Modality comparisons
 - b. Entry vs. completion vs. drops
 - *c. Recidivists vs. Non-recidivists
- 5. Cost/Efficiency Measures.
- 6. Catalytic Effects

IV. Conclusion:

To the extent that the results of the evaluative studies support recommendations for change in rehabilitation processes or procedures, such recommendations should explicitly be made and defined in this section.

* Most essential to the study.

ROW NO.	EVALUATION MEASURE	NOT REFER	TOTAL TREAT. ENTER	TOTAL TREAT. DROP	TOTAL TREAT. NO SHOW	SPECIFIC MODALITY/COMB. ENTRIES						OTHER TREAT.	RANDOM CNTRL.	NON RANDO CNTRL
						5	6	7	8	9	10			
		1	2	3	4							11	12	13
1	NUMBER ENTERING IN Q1													
2	Recidivists in Q1													
3	Recidivists in Q2													
4	Recidivists in Q3													
5	Recidivists in Q4													
6	Recidivists in Q5 + Q6													
7	Recidivists in Q7 + Q8													
8	Recidivists in Q9 + Q10													
9	Recidivists from Q11 on													
10	NUMBER ENTERING IN Q2													
11	Recidivists in Q2													
12	Recidivists in Q3													
13	Recidivists in Q4													
14	Recidivists in Q5													
15	Recidivists in Q6 + Q7													
16	Recidivists in Q8 + Q9													
17	Recidivists in Q10 + Q11													
18	Recidivists from Q12 on													
19	NUMBER ENTERING IN Q3													
20	Recidivists in Q3													
21	Recidivists in Q4													
22	Recidivists in Q5													
23	Recidivists in Q6													
24	Recidivists in Q7 + Q8													
25	Recidivists in Q9 + Q10													
26	Recidivists in Q11 + Q12													
27	Recidivists from Q13 on													
28	NUMBER ENTERING IN Q4													
29	Recidivists in Q4													
30	Recidivists in Q5													
31	Recidivists in Q6													
32	Recidivists in Q7													
33	Recidivists in Q8 + Q9													
34	Recidivists in Q10 + Q11													
35	Recidivists in Q12 + Q13													
36	Recidivists from Q14 on													

"APPENDIX H, TABLE 15" FORMAT

so as to reflect the entry to, and recidivism from, the major treatment programs or combination treatment programs utilized by that site. Provision was also made for the recording of the recidivism of total treatment entries (summing across individual modalities), individuals not referred for treatment, and no-treatment control or comparison groups.

The present report attempts to summarize both project and program level assessments of ASAP rehabilitation program effectiveness within three major areas. The first focuses on efforts to document the effectiveness of the total ASAP rehabilitation systems of the 35 projects. These analyses are intended to appraise the viability of the overall treatment program of the projects, rather than the performance of specific treatment modalities. The second area of analysis focuses on the alcohol safety schools which, more than the other treatment modalities utilized by the projects, were unique "ASAP inventions." Finally, the effectiveness of non-school alcohol treatment modalities (particularly those designed for problem drinkers) are examined through analysis of data pooled from the several projects to provide program level appraisals of treatment effectiveness.

OVERALL TREATMENT PROGRAM EFFECTIVENESS

The approach taken to the assessment of overall ASAP rehabilitation effectiveness at both the project and the program levels was to compare the performance of individuals who had been exposed to ASAP sponsored or coordinated treatment programs with the performance of individuals who were not referred to rehabilitation. In most instances both project and program level analyses were seriously handicapped by the fact that ASAP rehabilitation systems were not designed to support rigorous assessments of rehabilitation effectiveness. Only the Nassau County, New York, and Phoenix, Arizona, studies were originally structured to provide for the systematic use of random assignment procedures which incorporated actual no-treatment control groups to provide for experimental comparisons with those projects' treatment groups. In general, however, the conditions of a "true experiment"¹³ were not met in the design and implementation of ASAP rehabilitation programs in that no-treatment control groups were not provided for (or permitted) in most projects.

¹³Campbell, D. T. and Stanley, J. C. Experimental and Quasi-Experimental Designs for Research, Rand McNally, Chicago, 1963.

Nonetheless, "no-treatment" or "not referred" groups of clients were available at virtually every project by virtue of the fact that some clients were excluded from treatment programs. In some cases the ASAP rehabilitation systems simply could not process all of the clients convicted of DWI offenses, in other instances clients refused participation in ASAP programs, and in still other cases clients were judged to be unsuitable for entry to a project's rehabilitation program. In general, it was this group of non-exposed individuals which served as a no-treatment comparison group to support project and program level quasi-experimental analyses of ASAP program effectiveness.

Project Level Analyses of Total Treatment Effectiveness

Only the 1973 and 1974 analytic studies included analyses of total rehabilitation system effectiveness. The Analytic Studies No. 6 for 1972 were directed almost exclusively toward appraisals of the performance and effectiveness of alcohol safety schools. For the most part, the project level assessments of total program effectiveness which were accomplished utilized either crash involvement subsequent to contact with the ASAP program (either treatment entry or decision not to enter an ASAP treatment) and rearrest recidivism as criterion measures.

Figure 11 summarizes the results of project level analyses of overall rehabilitation system effects on motor vehicle crashes subsequent to ASAP contact. Two categories of studies are distinguished within each year's (1973 and 1974) studies. The designation "D/W" (Descriptive/Weak) refers to those studies which utilized either solely descriptive accounts of subsequent crash involvement, or which used inadequate statistical methods or research designs. The "A" (Adequate) designation indicates that the studies used some sort of quasi-experimental design which included a no-treatment comparison group at least superficially equivalent in composition to the treatment group, and that an appropriate inferential test of group differences in crash experience was performed. It should be noted that the fact of a given study being categorized as "D/W" rather than "A" is not necessarily a reflection of the competence of the evaluator responsible for that study. In many instances data was simply not available to support rigorous tests of overall treatment program effects on subsequent crash involvement. As indicated in Figure 11 only two of the 1973 and one of the 1974 studies were categorized as representing adequate

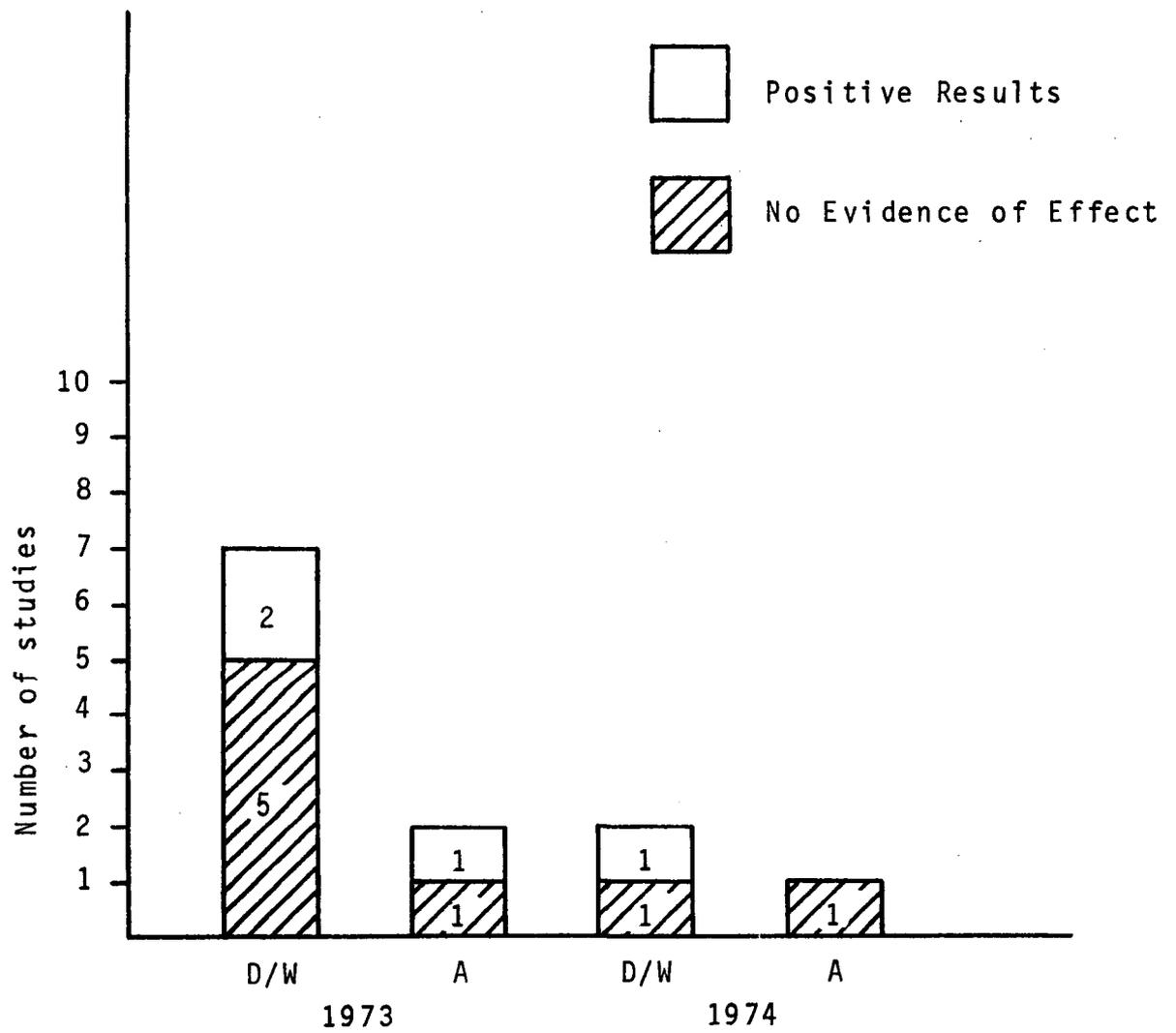


FIGURE 11. SUMMARY OF ANALYTIC STUDY NO. 6 RESULTS ASSESSING OVERALL REHABILITATION EFFECTS ON CRASHES.

empirical tests of the effect of ASAP treatment programs on the crash involvement criterion. The 1973 New Hampshire study compared crash involvement subsequent to ASAP contact with problem drinkers who had been referred to rehabilitation and problem drinkers who had not been referred and found no statistically significant differences. The 1973 Los Angeles study utilized a composite arrest plus accident involvement index as a measure of treatment effectiveness in comparing an ASAP treatment group (composed of three treatment groups: disulfiram, AA, and court schools) with a group of clients who had not been exposed to treatment referral because of a "transition period" in one of the courts during which time no referrals were made. On the basis of the combined rearrest/accident involvement measure the treatment groups showed marginally significant improvement when compared to the no-treatment group. The exposure period during which rearrests and accidents were recorded for these groups was seven months in duration. The single 1974 Analytic Study No. 6 listed in the "A" category was that submitted by the Vermont project. In this study the crash involvement of total treatment entries to the Vermont ASAP was compared to that of a group of non-DWI individuals. Despite the fact that the post treatment crash involvement of the ASAP treatment group was significantly less than that of the no-treatment group, it does not appear appropriate to conclude that these differences in crash involvement can be taken as evidence of treatment effectiveness since the comparison group did not represent a sample from the population of individuals for whom the Vermont ASAP rehabilitation system was designed (individuals convicted of DWI).

Figure 12 summarizes the results of project reported analyses of the effects of overall ASAP rehabilitation on rearrest recidivism for the 1973 and 1974 operational years. As indicated in this figure, substantially more evaluators were able to perform at least a descriptive analysis based on recidivism data. As was the case with the crash analyses, however, only a limited number of these studies employed designs or analyses which could be classified as adequate. Of the nineteen analyses of total treatment effectiveness reported in the 1973 analytic studies, four were categorized as methodologically adequate. Of this subgroup, the Los Angeles and Richland County, South Carolina, studies found the rearrest rate of "natural" control groups to be higher than the recidivism rate of the group of individuals who had been exposed to ASAP rehabilitation programs. In the San Antonio and New Hampshire studies, however, no differences in recidivism which would support claims of treatment effectiveness were observed.

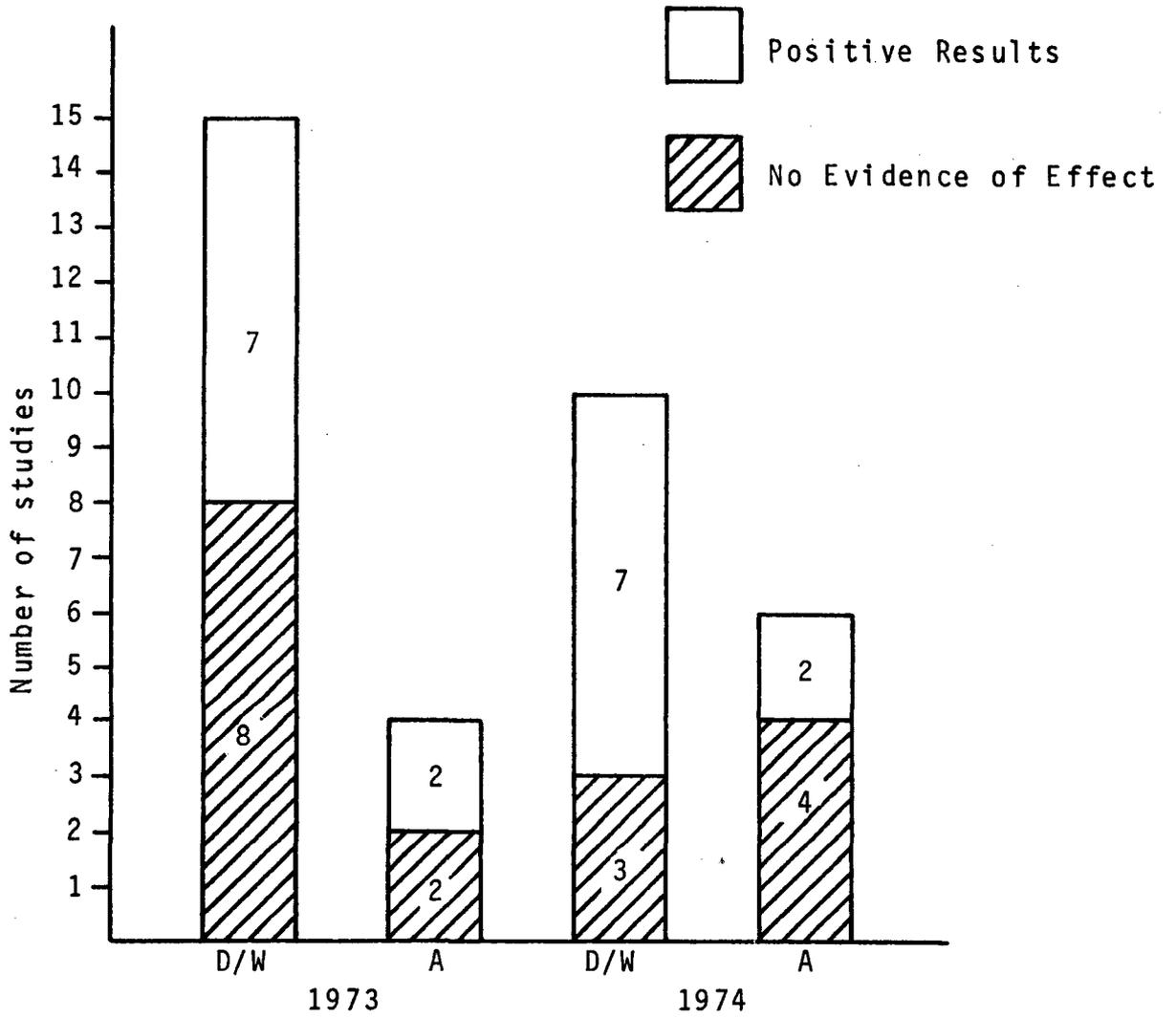


FIGURE 12. SUMMARY OF ANALYTIC STUDY RESULTS FOR ASSESSMENTS OF OVERALL REHABILITATION EFFECTS ON RECIDIVISM.

Six of the sixteen 1974 studies which included analyses of total treatment effectiveness were supported by adequate statistical analyses. Two of these studies (Vermont and Richland County, South Carolina) claimed reductions in recidivism attributable to the ASAP rehabilitation system. The conclusions of the Vermont study must be considered somewhat tenuous in that the comparison group used in this analysis did not represent the DWI population from which the Vermont rehabilitation referrals were drawn (the comparison group was a randomly selected group drawn from the employees of a factory and from a local National Guard Company). Although sophisticated and potentially sensitive statistical analyses were used in this study, the differential performance of the two groups compared does not present convincing evidence of rehabilitation system effectiveness. The Richland County study did, however, compare individuals who had entered the ASAP rehabilitation system to a "natural control group" composed of individuals who, despite conviction for DWI offenses, did not complete rehabilitation. Profile comparisons did not detect significant differences between the two groups, except for a recidivism rate differential which favored the treatment group.

The four adequate analyses whose results did not support claims of overall rehabilitation system effectiveness represented the most powerful set of statistical analyses applied to this evaluative question. In the case of the New Orleans, Los Angeles, and South Dakota studies, regression analysis/analysis of covariance procedures were applied to the assessment of the differential frequency of rearrest between treatment and no-treatment groups. Statistical control over alternative explanations for between group differences in rearrest frequency (covariance adjustment) was exercised in all three cases and no statistically significant evidence of treatment effectiveness was found. In addition to a treatment vs. no-treatment analysis of covariance, the South Dakota study employed an experimental design which utilized a random assignment control group and again found no difference in rearrests as a function of rehabilitation assignment. The Tampa study made use of extensive matching procedures in order to select a control group equivalent in important respects to the rehabilitation group, and compared group recidivism rates. Again, no significant difference in recidivism rates between control and treatment subjects were observed.

In general, it would appear fair to conclude that the individual analytic studies submitted in 1973 and 1974 provided no overwhelming evidence of program effectiveness as measured by reductions in crash or arrest recidivism.

In virtually every case, however, evaluative efforts were severely hampered by the absence of adequate experimental designs which would permit clear tests of total treatment effectiveness.

Program Level Analyses of Overall Treatment Effectiveness

As indicated previously, the primary data source for program level analyses of ASAP rehabilitation system effectiveness were annual recidivism tables ("Appendix H, Table 15") required by the NHTSA data reporting guidelines. The analyses reported in the present section were based on the recidivism tables submitted at the conclusion of the 1974 operational year. These tables presented entries to, and recidivists from, ASAP rehabilitation programs for the entire 1972-1974 operational period of interest to the present report. A total of seventeen recidivism tables were submitted by the following ASAPs:

1. Maine
2. New Hampshire
3. Vermont
4. Richland County, South Carolina
5. Cincinnati, Ohio
6. Hennepin County, Minnesota
7. Indianapolis, Indiana
8. New Orleans, Louisiana
9. Oklahoma City, Oklahoma
10. San Antonio, Texas
11. Kansas City, Missouri
12. Lincoln, Nebraska
13. Sioux City, Iowa
14. Wichita, Kansas
15. South Dakota
16. Phoenix, Arizona
17. Idaho

Assessments of overall rehabilitation effectiveness based on these "Table 15" data compared the performance of individuals entering any type of ASAP treatment program with the performance of individuals not referred to rehabilitation countermeasures, for each of the NHTSA drinker classifications (PD, NPD, UI). Data from only those sites reporting both total treatment entries (column 1 of "Table 15") and total not referred (column 2 of "Table 15") were used in these analyses. It must be noted that there is no assurance of the equivalence of the two groups of individuals represented in these "Table 15" columns and, in fact, there is ample reason to believe that a variety of selection biases operating

at each project contributed to the differential selection of the two groups. As a consequence, observed differences in the rates of rearrest between the two groups cannot necessarily be attributed solely to the presence or absence of ASAP rehabilitation exposure.

Analyses of the pooled (across projects) recidivism data is based on the life table--survival rate model frequently used to study patterns of mortality in patients afflicted with chronic diseases. From this perspective the rearrest of a treatment entry or not referred client would be viewed as analogous to the death of a cancer patient, and the analytic problem is one of describing the manner in which each client cohort (treatment or no-treatment group) is depleted over time. The use of this model implies a dichotomous success criterion for each individual client--either he survives (does not recidivate) or does not survive (is rearrested). Multiple rearrests are not handled by the model, but neither are they recorded in "Table 15." The important question relative to the behavior of each individual is the time at which recidivism occurs, or alternatively the duration of a client's survival without rearrest.

For purposes of the present analyses, cumulative survival rates, standard errors of each survival rate estimate, and effective sample sizes were calculated, according to methods described by Cutler and Ederer,¹⁴ from the "Appendix H, Table 15" records of treatment entries and recidivism. The procedure suggested by these authors, and implemented in the Biomedical Computer Program Series,¹⁵ allows the estimation of survival rates and cumulative survival rates for situations in which the members of a particular group are exposed to the risk of failure (death, rearrest, or other dichotomous criterion) for differing amounts of time. The procedure also permits the computation of standard errors of estimate for each survival rate, and the calculation of effective sample sizes for each exposure interval. The "Table 15" format (See Exhibit C) stipulated the reporting of the number of total treatment and total not referred (columns 1 and 2) entries for each of the twelve quarters of the 1972-1974 period. The number of

¹⁴Cutler, S. J. and Ederer, F. Maximum utilization of the life table method in analyzing survival. Journal of Chronic Diseases, December, 1958, 699-712.

¹⁵Dixon, W. J. (Ed.) BMD: Biomedical Computer Programs, University of California Press, Berkeley, 1974, 465-484.

recidivists from each of the twelve entry quarters was then recorded in quarterly intervals for the first year subsequent to the entry quarter, and in six month intervals thereafter. Thus individuals entering the ASAP system in the first quarter (quarter 1, 1972) were observed for a full three years subsequent to entry, while those entering in the last quarter (quarter 4, 1974) were only observed during the quarter of entry. The survival rate procedure allows for the consideration of the entire set of twelve entry quarters in the estimation of cumulative survival rates for each of the eight intervals (4 quarterly and 4 biannual intervals) subsequent to entry.

Two types of analyses were based on this general survival rate model. The first involved the pooling of "Table 15" data from those sites reporting recidivism information for both total treatment entries and not referred groups. This was done separately for each of the NHTSA drinker classifications, resulting in the use of data from fourteen sites for problem and unidentified drinker types, and from thirteen sites for non-problem drinkers. The pooled cumulative survival rates for treatment entries and not referred groups were then compared at each of the eight intervals subsequent to entry by means of the t test procedure utilized in the Biomedical Computer Program Series survival rate programs.¹⁶

The second analytic procedure involved the computation of cumulative survival rates for each project's data separately and then the application of a multivariate profile analysis to these estimates of survival rate. Multiple profile analysis¹⁷⁻¹⁸ involves a multivariate analysis of variance performed on p-1 successive differences in a profile of p variables. In the present case the p variables consist of the set of cumulative survival rate estimates calculated for each project, and each group (total treatment entries or not referred clients). Whereas the pooled survival rate analyses discussed previously involved a comparison of the

¹⁶Ibid., p. 53.

¹⁷Morrison, D. F. Multivariate Statistical Methods.
New York: McGraw Hill, 1967.

¹⁸Harris, Richard J. A Primer of Multivariate Statistics.
New York: Academic Press, 1975.

composite survival rates for treatment and no-treatment groups of all projects collectively, the present procedure considers the survival rates calculated for each site's treatment and no-treatment groups as independent estimates of treatment and no-treatment group performance. The profile analysis procedure thus examines mean differences in cumulative survival rate over time.

The first hypothesis tested by this analysis is that the p-1 differences between successive survival rate estimates are zero, or that the profile of survival rate (over time) is flat. This is accomplished as a multivariate test on the vector of successive differences. The second hypothesis is that the shape of the survival rate profile is the same for each group (treatment entries and not referred groups). This is the multivariate test of parallelism of the group profiles. Finally a univariate test on the sum of the p survival rate estimates is performed to test the hypothesis of no between group differences.

Problem Drinkers. Figure 13 shows the pooled three year cumulative survival rate curves for problem drinkers from fourteen of the ASAPs.* Table 9 summarizes the survival rate analyses upon which this figure was based. Although the t tests obtained in comparing the survival rate estimates for total treatment entries and the not referred group are statistically significant at 1, 2, 6, 8, 10, and 12 quarters after entry, the shape of the curves is similar for both groups and the absolute size of the difference in survival rates is probably not of practical significance at any of these intervals (the largest difference is a 4.9% difference in the number surviving after ten quarters of exposure). The notable feature of this analysis is the extremely steep drop in the proportion of individuals surviving without rearrest across the three year period of observation. At the conclusion of the three year period only 60.6% of the treatment entry group, and 63.8% of the no-treatment group of problem drinkers had not experienced a second arrest for an alcohol related traffic offense. (39.4% of the treatment entries and 36.2% of the not referred group had become recidivists).

*Data from the following projects were pooled for this composite survival rate analysis (projects designated by state abbreviation): ME, SC, OH, MN, LA, OK, TX, MO, NE, IA, KS, SD, AR, ID.

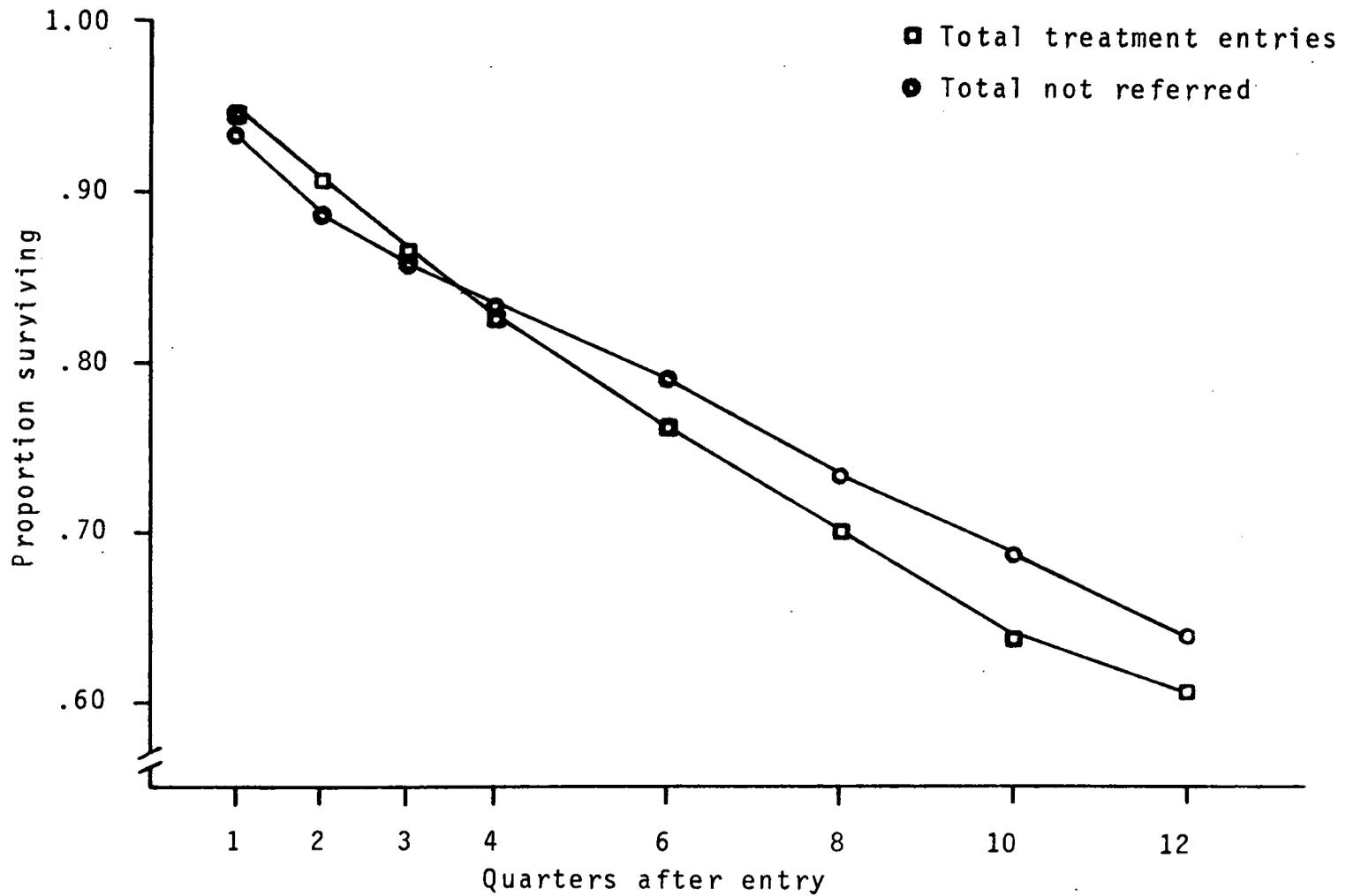


FIGURE 13. COMPARISON OF 12 QUARTER SURVIVAL RATES FOR PROBLEM DRINKERS ENTERING ANY ASAP TREATMENT AND PROBLEM DRINKERS NOT REFERRED. DATA FROM 14 ASAPs.

TABLE 9. SUMMARY OF SURVIVAL RATE ANALYSIS FOR PROBLEM DRINKERS REFERRED TO ASAP TREATMENT VS. THOSE NOT REFERRED (DATA FROM FOURTEEN SITES).

	Quarter After Entry							
	1	2	3	4	6	8	10	12
Cumulative Survival Rate								
Treatment Entry	.948	.907	.869	.827	.763	.701	.639	.606
Not Referred	.934	.888	.860	.833	.790	.735	.688	.638
Standard Errors								
Treatment Entry	.0015	.0020	.0024	.0028	.0034	.0042	.0056	.0079
Not Referred	.0026	.0034	.0038	.0042	.0049	.0061	.0077	.0119
Effective Sample Sizes								
Treatment Entry	22084	10371	7115	5829	6063	4238	2542	786
Not Referred	8730	4001	2041	1660	1981	1728	998	478
t tests	4.49*	4.83*	1.87	-1.22	-4.43*	-4.62*	-5.12*	-2.24*

*p < .01

Table 10 summarizes the profile analysis conducted on the separate survival rate estimates calculated for 29 treatment and no-treatment groups.* This analysis only considered the first eight quarters after treatment entry, since sufficient data to provide stable estimates for third year survival rates was unavailable for some of the projects. In this case the average survival rates of treatment entry groups for the first quarter after entry was .969 (96.9% not rearrested), while the average first quarter survival rate for the not referred individuals from these projects was .932. Average eighth quarter survival rates were .809 for the treatment group and .692 for the not referred group. The multivariate test of parallelism ($F = 1.868$, $df = 5 \text{ \& } 23$, $p = .139$) suggests that the shape of the recidivism profiles was the same for the two groups, while the significant multivariate F ratio (40.034 , $df = 5 \text{ \& } 23$, $p = .000$) for the test of the slope of the cumulative survival rate profile indicates a sharp decrease in the proportion of both groups surviving across the two year follow-up period. The marginally significant F ratio ($F = 3.934$, $df = 1 \text{ \& } 27$, $p = .055$) for the levels (group differences) hypothesis suggests that, overall, the treatment group performed better (experienced a higher survival rate) than did the no-treatment group. Although this result is encouraging in that it favors the ASAP treatment group, it should be recalled that the pooled survival rate analyses presented previously found the no-treatment group to exhibit larger cumulative survival rates during the last two years of the study period (quarters 6-12). In view of the conflicting results of the two analyses there appears to be little basis for asserting the effectiveness of overall rehabilitation exposure on the recidivism experience of problem drinkers, particularly in view of the fact that the treated and non treated groups whose performance was compared are not known to be equivalent.

*Survival rate estimates calculated from "Table 15" data submitted by the following projects were used in this analysis:

Total treatment entries: ME, NH, VT, OH, MN, IN, LA, OK, TX, MO, NE, IA, KS, SD, AR, ID

Total not referred: SC, OH, MN, LA, OK, TX, MO, NE, IA, KS, SD, AR, ID.

TABLE 10. SUMMARY OF PROFILE ANALYSIS BETWEEN PROBLEM DRINKER TREATMENT ENTRIES AND PROBLEM DRINKERS NOT REFERRED TO TREATMENT (DATA FROM SIXTEEN SITES).

	Quarter After Entry								
	1	2	3	4	6	8			
Mean Survival Rate									
Treatment Entry	.969	.941	.914	.889	.848	.809			
Not Referred	.932	.884	.842	.819	.756	.692			
Differences	1-2	2-3	3-4	4-6	6-8				
Treatment Entry	.028	.027	.025	.041	.039				
Not Referred	.048	.042	.023	.063	.064				
Univariate F Ratios	4.70*	1.93	.15	2.46	3.85				

Multivariate Test of Parallelism Hypothesis: $F = 1.868$; $df = 5, 23$; $p = .139$

Levels Hypothesis: $F = 3.934$; $df = 1, 27$; $p = .055$

Multivariate Test of Flatness Hypothesis: $F = 40.034$; $df = 5, 23$; $p < .001$

* $p < .05$

Non-Problem Drinkers. Figure 14 shows the pooled three year cumulative survival rate curves for non-problem drinkers from thirteen of the ASAPs,* and Table 11 summarizes the survival rate analysis between non-problem drinker treatment entry and not referred groups. In the case of non-problem drinkers the survival rate curve of the treatment entry group is consistently above that of the not referred group across all twelve follow-up quarters, and the differences between the two groups are statistically significant at each quarter. Inspection of Figure 14 suggests that the between groups differences become increasingly larger over the three year follow-up period, resulting in a 10.4% difference in the proportion surviving after three years' exposure to the risk of rearrest (81.1% of the treatment group and 70.7% of the no-treatment group survived without rearrest).

The profile analysis reported in Table 12 treated non-problem drinker survival rate estimates from 24 treatment and no-treatment groups.** This analysis did not detect between group differences in survival rates across a two year exposure period, although for each of the six intervals the performance of the treatment group was superior to that of the not referred group.

Conclusions from these analyses must, of course, be qualified by acknowledging that the not referred group does not represent a systematically assigned control group. The consistently higher survival rates recorded for the treatment group does, however, suggest the possibility that the ASAP treatment intervention may have influenced those non-problem drinkers referred to rehabilitation programs.

*Data from the following projects were pooled for this composite survival rate analysis: SC, OH, MN, LA, OK, TX, MO, NE, IA, KS, SD, AR, ID.

**Survival rate estimates calculated from "Table 15" data submitted by the following projects were used in this analysis:

Total treatment entries: VT, OH, MN, IN, LA, OK, TX, MO, NE, IA, KS, SD, AR, ID

Total not referred: OH, MN, LA, TX, MO, NE, KS, SD, AR, ID.

POSSIBLE FEDERAL ALCOHOL SAFETY INITIATIVES

REVISION OF HIGHWAY SAFETY ACT (SECTION 402 (b)(1))

o STATE COMPREHENSIVE ALCOHOL SAFETY PROGRAM REQUIREMENT:

WOULD AMEND SECTION 402, b, 1 WITH A REQUIREMENT FOR EACH STATE TO HAVE A COMPREHENSIVE ALCOHOL SAFETY PROGRAM MUCH AS SECTION b, 1, E REQUIRES A COMPREHENSIVE DRIVER EDUCATION PROGRAM. (ALTERNATIVE-SUBSTITUTE ALCOHOL SAFETY FOR DRIVER EDUCATION).

o SPECIAL CONGRESSIONAL APPROPRIATION FOR STATE COMPREHENSIVE ALCOHOL PROGRAM "SEED MONEY" & COUNTERMEASURE SUPPORT:

WOULD PROVIDE A SPECIAL ONE-TIME ONLY APPROPRIATION TO FUND THE START-UP OF STATE COMPREHENSIVE ALCOHOL SAFETY PROGRAMS. FUNDING WOULD ALSO SUPPORT INTENSIVE NHTSA TECHNOLOGY TRANSFER PROGRAM TO TRAIN LOCAL SAFETY SYSTEM PERSONNEL (POLICE, JUDGES, PROSECUTORS, REHAB.) AND GENERATE CITIZEN ACTIVISM.

o REVISED ALCOHOL AND HIGHWAY SAFETY STANDARD 308:

WOULD UPDATE STANDARD 308 AND ATTENDANT MANUAL TO REFLECT REQUIREMENTS FOR COMPREHENSIVE ALCOHOL SAFETY PROGRAMS DERIVED FROM ASAP & OTHER ALCOHOL PROGRAM EXPERIENCE.

o INCREASED COMMUNITY ACTION ALCOHOL & HIGHWAY SAFETY WORKSHOPS

SIMILAR TO THE SAFETY BELT/CHILD RESTRAINT WORKSHOPS, ALCOHOL & HIGHWAY SAFETY CONFERENCES WOULD BE HELD ACROSS THE COUNTRY TO MOBILIZE CITIZENS GROUPS TO PRESS FOR LOCAL ALCOHOL SAFETY PROGRAMS AND NEEDED LEGISLATION. THE EMPHASIS WOULD BE ON INDIVIDUAL AND GRASS ROOT FOR PROMOTING INCREASING ALCOHOL COUNTERMEASURES. (SEE ACTIVIST'S GUIDE)

ALCOHOL SAFETY INITIATIVES

REVISION OF SECTION 402 (b): COMPREHENSIVE ALCOHOL SAFETY PROGRAM

SECTION 402 (b) (1) (E) OF THE HIGHWAY SAFETY ACT (23 USC 402) SPECIFIES THAT THE "SECRETARY SHALL NOT APPROVE ANY STATE HIGHWAY SAFETY PROGRAM ... WHICH DOES NOT - (E) PROVIDE FOR COMPREHENSIVE DRIVER TRAINING PROGRAMS...

A SIMILAR SPECIFICATION COULD BE AMENDED (OR SUBSTITUTED) TO SECTION 402 (b) (1) PROVIDING FOR A "COMPREHENSIVE ALCOHOL SAFETY PROGRAM," (INCLUDING (1) AN INTEGRATED TRAFFIC SAFETY SYSTEM (INCLUDING POLICE, COURTS, TREATMENT AND LICENSING AGENCIES) FOR HANDLING ALCOHOL-TRAFFIC OFFENDERS, COORDINATED BY LOCAL GOVERNMENT OFFICIALS; (2) FINANCIALLY SELF-SUPPORTING SYSTEM AND SYSTEM ELEMENTS BY (a) PLACING FINANCIAL BURDEN ON OFFENDERS THROUGH FINES AND FEES, (b) LOCAL CONTROL OF REVENUES AND EXPENDITURES, ETC.).

ALCOHOL SAFETY INITIATIVES

Alcohol and Highway Safety Workshops

Workshop Series A

Participants: State/Local Officials

Subject Matter: Promotion of Alcohol
Safety System
concept; legislative
package-per se, PBT;
individual counter-
measure recommendations;
police training; judicial
education, etc.

Workshop Series B

Participants: Volunteer/Grass
Roots Organizations

Subject Matter: Citizen actions to
promote alcohol
safety system;
lobbying for alcohol
safety legislation;
personal action;
community
organization programs

ALCOHOL SAFETY INITIATIVES

Old Standard

To broaden the scope and number of activities directed toward reducing traffic accident loss experience arising in whole or in part from persons driving under the influence of alcohol.

Standard:

- o Driving Under Influence
Illegal
- o 0.10% BAC
- o Implied Consent
- o BACs on Fatals
- o Chemical Test Personnel
& Equipment Certifications
- o Program Evaluation

New Standard

To broaden the scope and number of activities directed toward reducing traffic accident loss experience arising in whole or in part from persons driving under the influence of alcohol.

Standard:

- o Integrated Traffic Safety
System, Police, Court
- o Local Coordination of System &
Elements
- o Financial Self Supporting System
(Burden on offender: Fines & Fees)
- o Local Control of Revenues &
Expenditures
- o Illegal Per Se
- o Preliminary Breath Testing
- o Mandatory Education/Treatment
- o Alcohol Records
- o Elements of Old Standard
- o Etc.

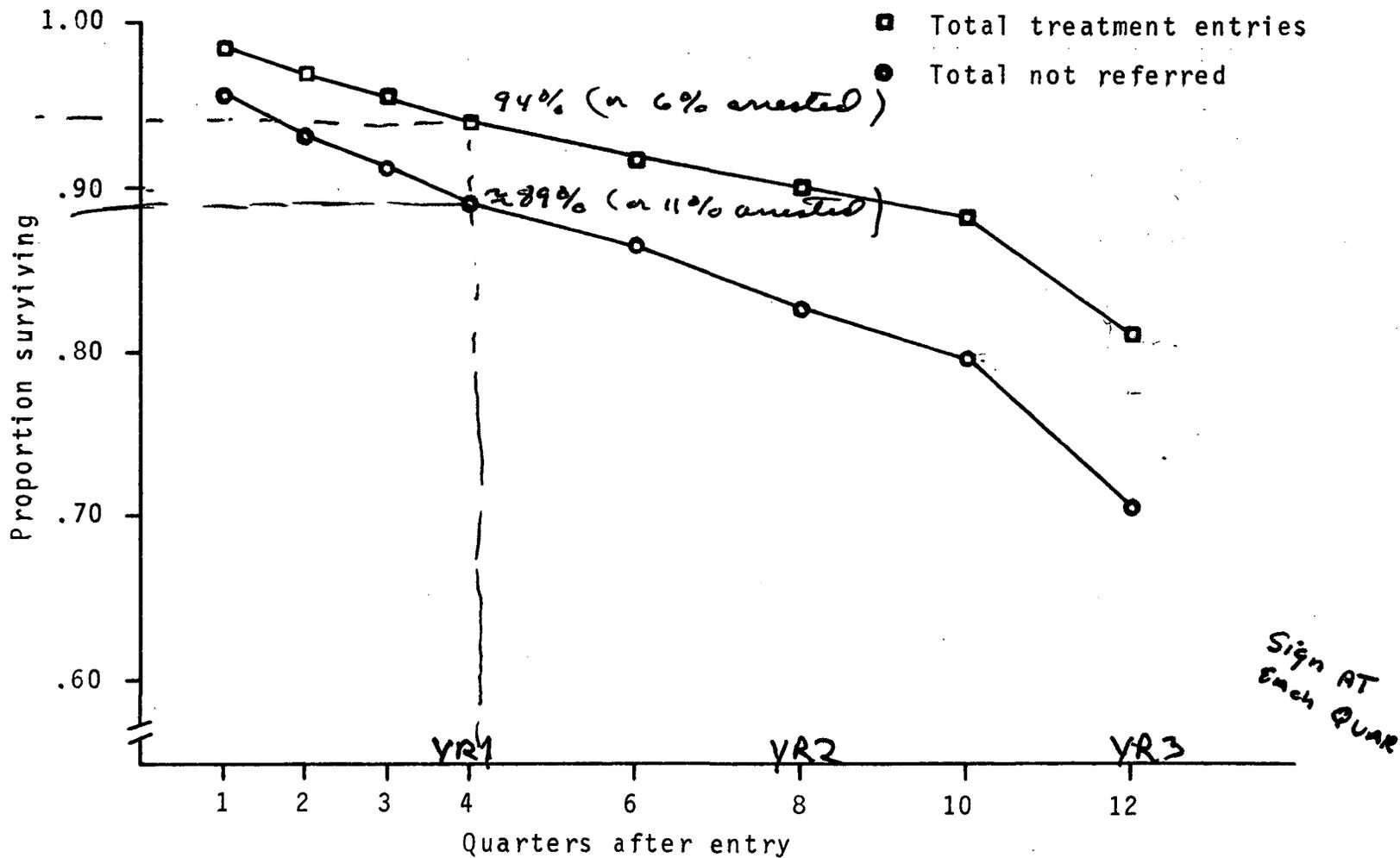


FIGURE 14. COMPARISON OF 12 QUARTER SURVIVAL RATES FOR NON-PROBLEM DRINKERS ENTERING ASAP TREATMENT AND NON-PROBLEM DRINKERS NOT REFERRED. DATA FROM 13 SITES.

TABLE 11. SUMMARY OF SURVIVAL RATE ANALYSIS FOR NON-PROBLEM DRINKERS REFERRED TO ASAP TREATMENT VS. THOSE NOT REFERRED (DATA FROM THIRTEEN SITES).

	Quarter After Entry							
	1	2	3	4	6	8	10	12
Cumulative Survival Rate								
Treatment Entry	.983	.969	.955	.939	.919	.902	.883	.811
Not Referred	.957	.933	.912	.891	.867	.828	.798	.707
Standard Errors								
Treatment Entry	.0009	.0013	.0015	.0018	.0022	.0026	.0034	.0092
Not Referred	.0015	.0019	.0022	.0025	.0028	.0034	.0042	.0082
Effective Sample Sizes								
Treatment Entry	19760	9337	6019	4728	4270	2653	1734	886
Not Referred	17079	6766	4430	3700	3266	3529	2000	1488
t tests	14.56*	15.63*	15.84*	15.82*	14.62*	16.83*	15.59*	8.43*

*p < .01

TABLE 12. SUMMARY OF PROFILE ANALYSIS BETWEEN NON-PROBLEM DRINKER TREATMENT ENTRIES AND NON-PROBLEM DRINKERS NOT REFERRED TO TREATMENT (DATA FROM FOURTEEN SITES).

	Quarter After Entry					
	1	2	3	4	6	8
Mean Survival Rate						
Treatment Entry	.989	.975	.960	.943	.919	.898
Not Referred	.980	.963	.949	.932	.902	.874
Differences	1-2	2-3	3-4	4-6	6-8	
Treatment Entry	.014	.015	.017	.024	.021	
Not Referred	.017	.014	.017	.030	.028	
Univariate F Ratios	.34	.06	.14	.83	1.48	

Multivariate Test of Parallelism: $F = 1.184$; $df = 5, 18$; $p = .355$

Levels Hypothesis: $F = .662$; $df = 1, 22$; $p = .570$

Multivariate Test of Flatness Hypothesis: $F = 15.642$; $df = 5, 18$; $p < .001$

Unidentified Drinkers. Figure 15 shows cumulative survival rate curves for treatment entry and not referred drinkers classed as unidentified. These rates are based on data pooled from the same fourteen sites as were included in the problem drinker analyses. Inspection of Figure 15 and Table 13 would suggest that while both groups exhibit a rather substantial and linear decline in the proportion surviving, no major differences between treatment and not referred groups are apparent.

The profile analysis summarized in Table 14 also shows the survival rate profiles of the two groups to be parallel and similar in level.

EFFECTIVENESS OF ALCOHOL SAFETY SCHOOLS

Alcohol safety schools were included within the rehabilitation systems of nearly every project, and represent the most extensively documented ASAP re-education/rehabilitation countermeasure program. Volume I of the present report contains a description of the schools utilized by each of the ASAPs. Because schools were almost universally employed as rehabilitation modalities, and because the control of this rehabilitation countermeasure usually rested with the ASAP itself, more evaluative efforts have been expended in attempts to document effectiveness for this than for any other treatment countermeasure. Analyses of the effectiveness of this particular rehabilitation modality were conducted at both program and project levels, and the results of these analyses are considered separately in the present section.

Project Level Analyses of Alcohol Safety Schools

Unlike assessments of total rehabilitation system performance, the evaluation of the alcohol safety schools was a topic of Analytic Study No. 5 guidelines during each of the years covered by the present report. The analytic studies submitted by the ASAPs to fulfill this NHTSA reporting requirement have used arrest recidivism as a primary success criterion, but many have also considered intermediate measures of program effectiveness as well. The most commonly used intermediate criterion of alcohol safety school effectiveness reported in the 1972, 1973, and 1974 analytic studies was knowledge change in those clients exposed to this form of re-education/rehabilitation.

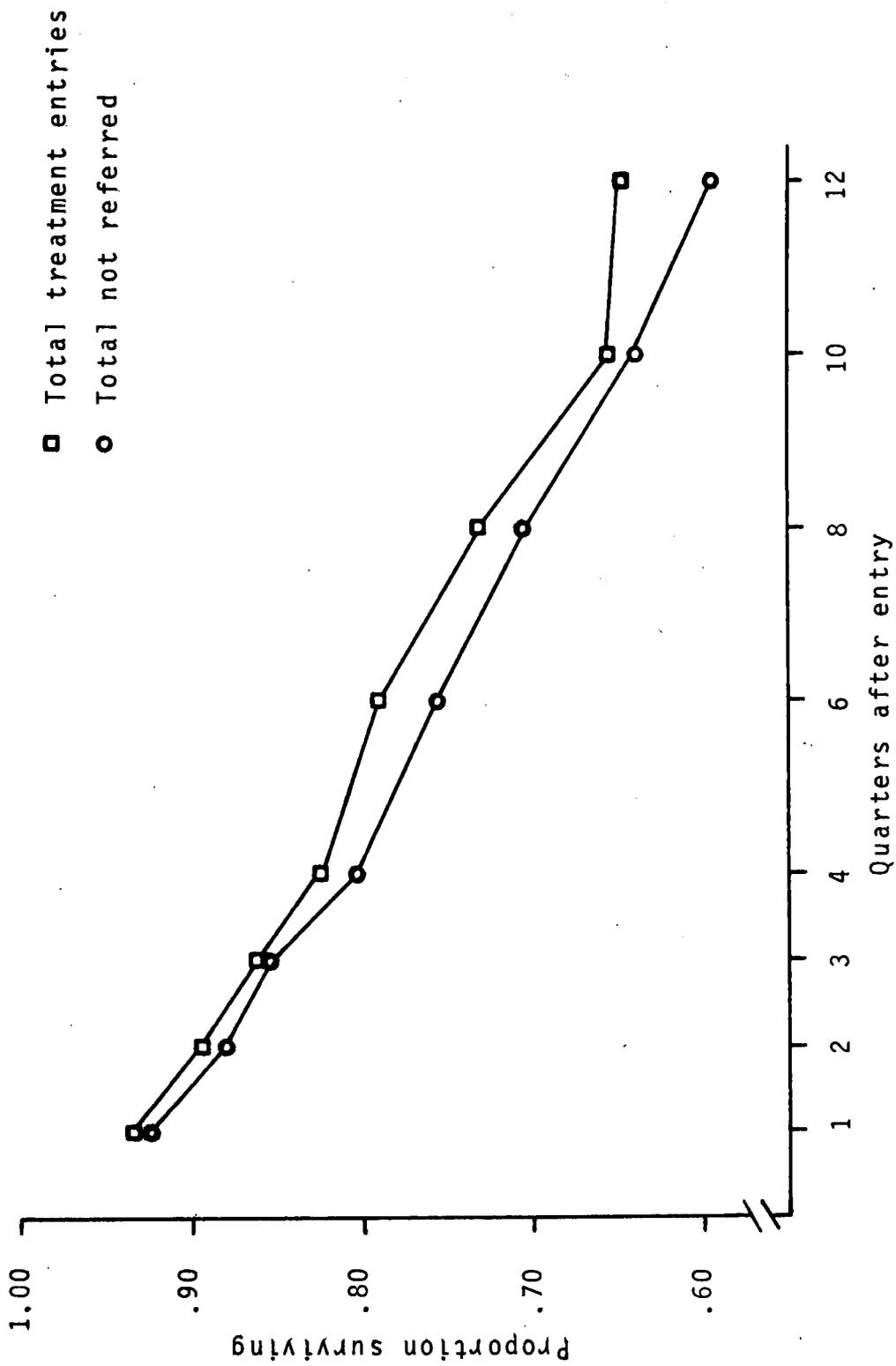


FIGURE 15. COMPARISON OF 12 QUARTER SURVIVAL RATES FOR UNIDENTIFIED DRINKERS ENTERING ASAP TREATMENT AND UNIDENTIFIED DRINKERS NOT REFERRED. DATA FROM 14 SITES.

TABLE 13. SUMMARY OF SURVIVAL RATE ANALYSIS FOR UNIDENTIFIED DRINKERS REFERRED TO ASAP TREATMENT VS. THOSE NOT REFERRED (DATA FROM FOURTEEN SITES).

Quarter After Entry

	1	2	3	4	6	8	10	12
Cumulative Survival Rate								
Treatment Entry	.036	.895	.861	.825	.791	.732	.654	.649
Not Referred	.925	.881	.855	.802	.758	.704	.641	.596
Standard Errors								
Treatment Entry	.0027	.0035	.0040	.0046	.0053	.0072	.0117	.0128
Not Referred	.0020	.0025	.0027	.0032	.0036	.0043	.0056	.0080
Effective Sample Sizes								
Treatment Entry	7884	3431	2231	1858	1409	1339	690	51
Not Referred	16774	7177	3731	5631	3989	3553	2575	1036
t tests	3.21	3.14	1.11	4.08	5.10	3.28	1.01	3.50

TABLE 14. SUMMARY OF PROFILE ANALYSIS BETWEEN UNIDENTIFIED DRINKER TREATMENT ENTRIES AND UNIDENTIFIED DRINKERS NOT REFERRED TO TREATMENT (DATA FROM SIXTEEN SITES).

	Quarter After Entry					
	1	2	3	4	6	8
Mean Survival Rate						
Treatment Entry	.970	.944	.914	.875	.834	.792
Not Referred	.957	.948	.927	.895	.857	.800
Differences	1-2	2-3	3-4	4-6	6-8	
Treatment Entry	.026	.030	.039	.041	.042	
Not Referred	.009	.021	.032	.038	.057	
Univariate F Ratios	1.15	.68	.22	.02	.28	

Multivariate Test of Parallelism: $F = .521$; $df = 5, 21$; $p = .759$

Levels Hypothesis: $F = .057$; $df = 1, 25$; $p = .808$

Multivariate Test of Flatness Hypothesis: $F = 6.080$; $df = 5, 21$; $p = .002$

Figure 16 summarizes the reported results of analyses which have utilized this criterion measure. As indicated in this figure, each study which reported analyses of knowledge change has found improvement associated with attendance of the ASAP alcohol safety schools. In virtually every case the studies compared the pre-treatment with the post-treatment performance of alcohol safety school clients on paper-and-pencil tests which purported to measure knowledge in the areas of traffic laws pertaining to alcohol related offenses, the physiological and psychological effects of alcohol and alcohol intoxication, and awareness of drinking problem symptoms and consequences. The unanimity of the reported results leaves little doubt that attendance at these schools does in fact improve knowledge in the topic areas which define the schools' curriculum. Unfortunately, the knowledge tests used in these analyses are poorly documented, and in many cases appeared to be the invention of the local evaluator or school coordinator.

Figure 17 summarizes the results of project level analyses designed to assess attitude change in clients referred to alcohol safety schools. Again, in most instances these analyses indicated improvement in client attitude toward the gravity of the alcohol traffic safety problem, toward alcohol traffic safety countermeasure efforts, and toward personal responsibility for controlling drinking/driving behavior. The designs used in these studies again involved pre- vs. post-course tests designed to measure client attitude in the areas mentioned above. As was the case with knowledge tests, the instruments used to assess change in client attitude are poorly documented in the analytic studies. In most cases it would appear that these instruments consisted of small sets of non-standardized semantic differential type items whose psychometric properties were unknown and untested.

The results of project level analyses which considered rearrest for alcohol related traffic offenses as a criterion measure of alcohol safety school effectiveness are shown in Figure 18. Each year's studies were again classified as representing descriptive or weak analyses (D/W) on the one hand, or as adequate statistical evaluations (A) on the other. Project level efforts to document the effects of alcohol safety schools on this criterion were hampered by the same methodological constraints which plagued efforts to assess the overall effectiveness of ASAP rehabilitation

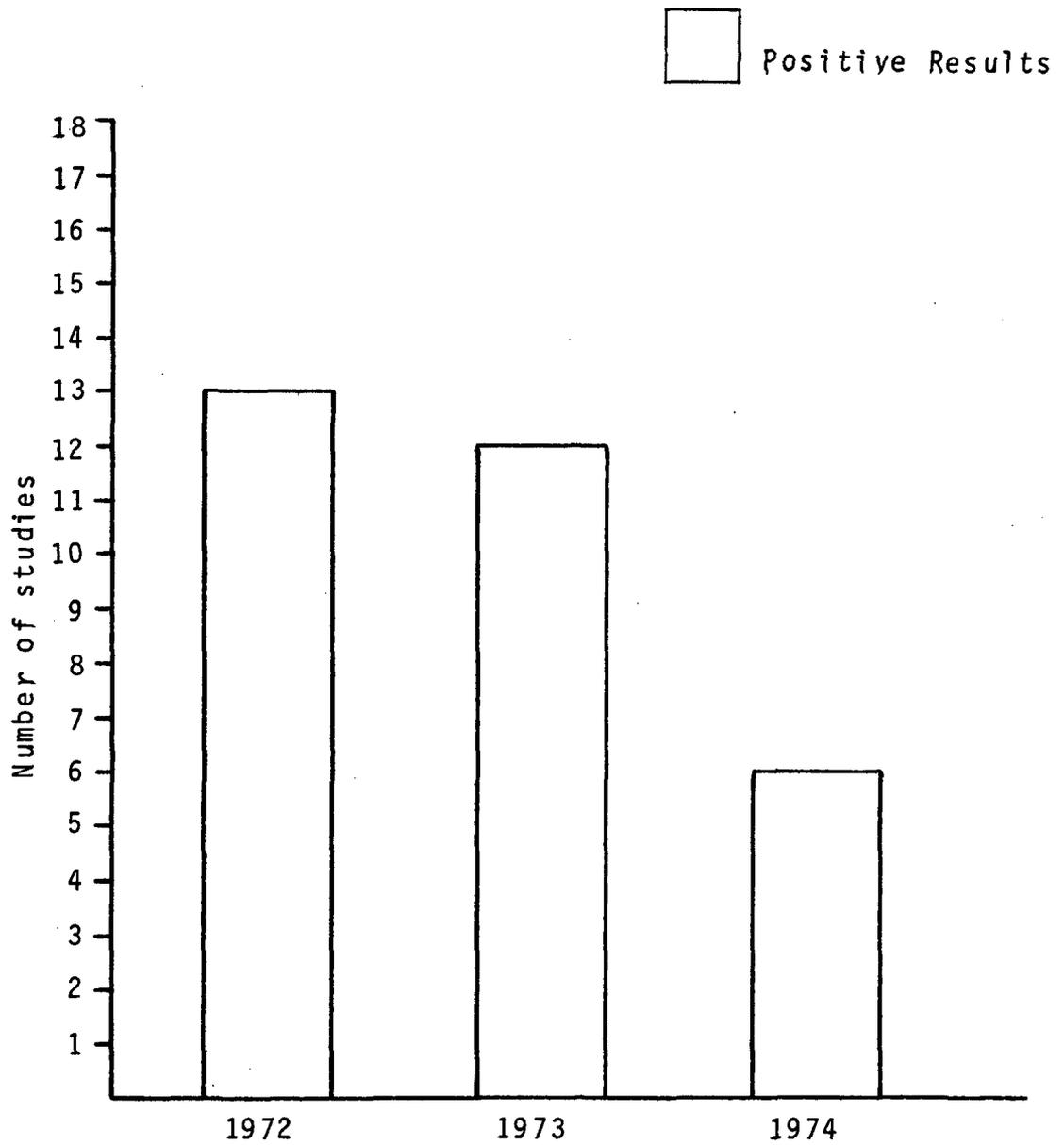


FIGURE 16. SUMMARY OF ANALYTIC STUDY RESULTS FOR ASSESSMENTS OF KNOWLEDGE CHANGE IN CLIENTS ATTENDING ALCOHOL SAFETY SCHOOLS.

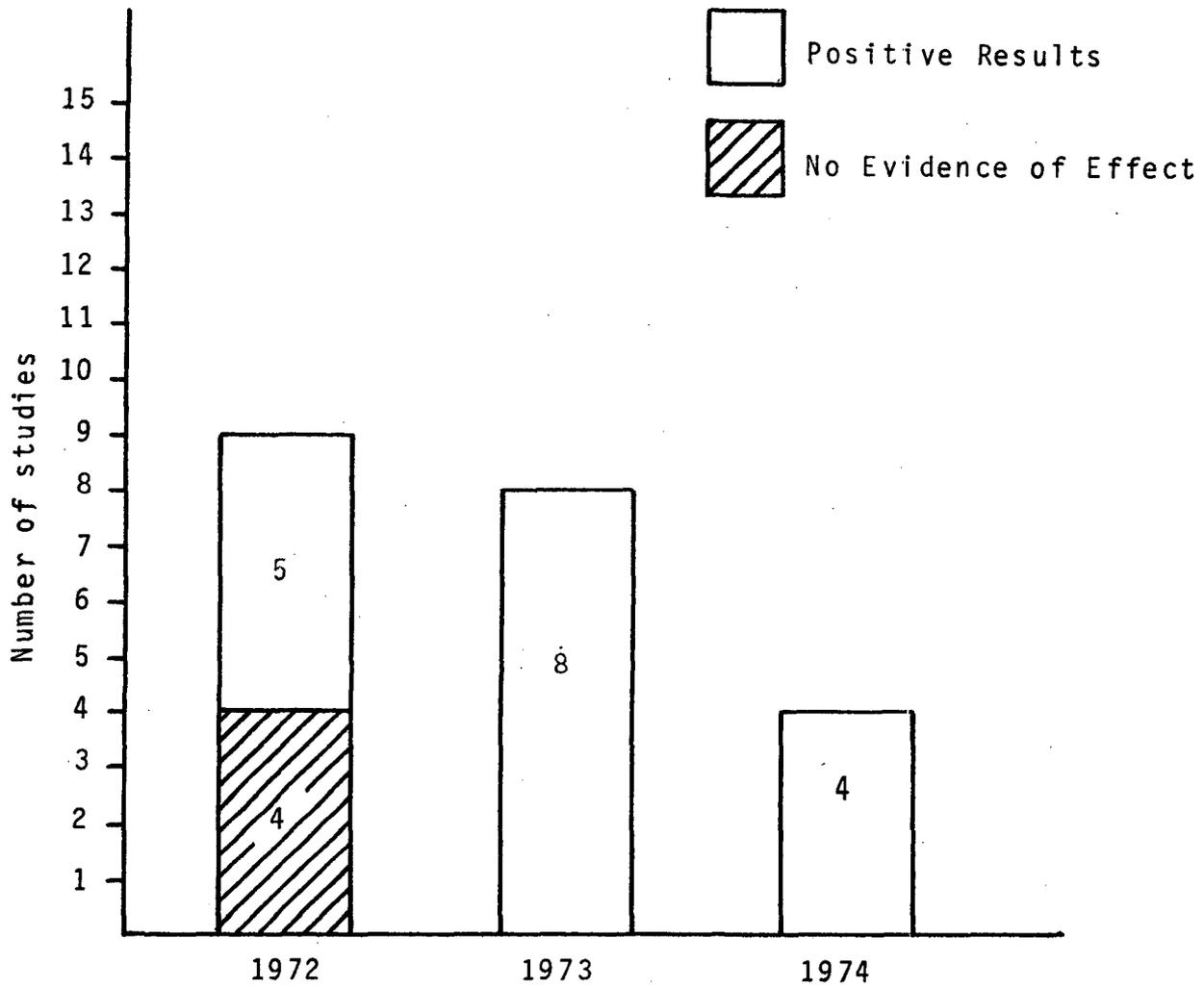


FIGURE 17. SUMMARY OF ANALYTIC STUDY RESULTS FOR ASSESSMENTS OF ALCOHOL SAFETY SCHOOL CLIENT ATTITUDE CHANGE.

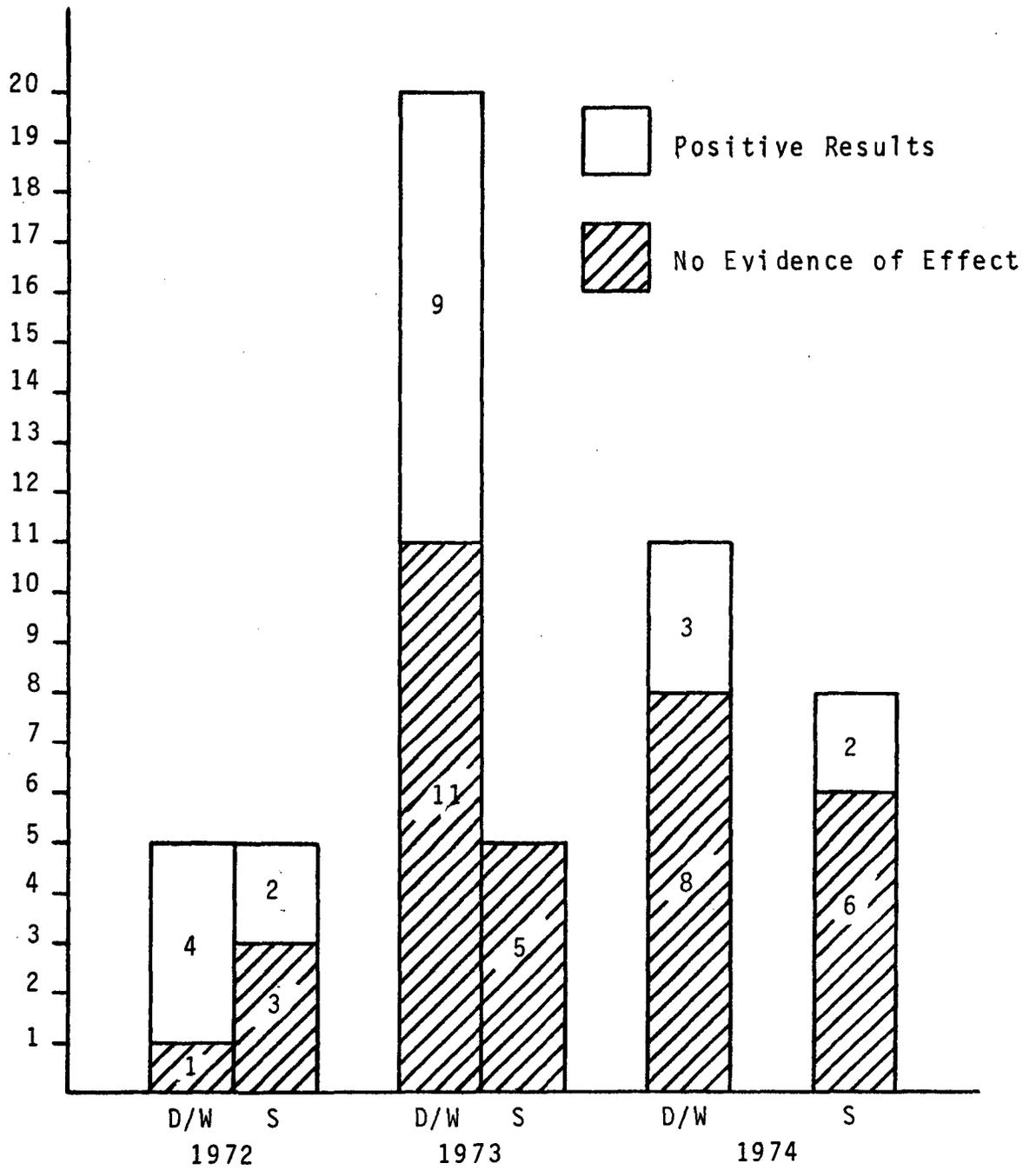


FIGURE 18. SUMMARY OF ANALYTIC STUDY RESULTS FOR ASSESSMENTS OF ALCOHOL SAFETY SCHOOL EFFECTS ON RECIDIVISM.

programs, and most claims of effectiveness for this rehabilitation modality were not supported by adequate experimental designs or rigorous statistical tests. Two of the 1974 studies categorized as adequate statistical evaluations did, however, find reduced rearrest recidivism among clients referred to alcohol safety schools. The Phoenix, Arizona, study reported significantly lower recidivism rates for literature only, and one session alcohol school clients than for a random assignment control group. No statistically significant difference was observed between the recidivism rates of a four session alcohol safety school group and that of the control group. No readily apparent explanation for the superior performance of these two extremely brief schools is available, particularly in light of the fact that the rearrest frequency of clients attending the most intensive of Phoenix's alcohol safety schools could not be statistically differentiated from that of the control group. It should be noted that the Phoenix project was the only ASAP to employ a true experimental design which employed random assignment procedures and a no-treatment control group during the entire period covered by the present report.

Positive results were also reported in the 1974 Columbus, Georgia, Analytic Study No. 6. This study reported lower recidivism rates for problem drinkers assigned to the alcohol safety school than for a group of problem drinkers who were not referred to rehabilitation. No differences were found between school and no-treatment groups of non-problem drinkers, however. None of the other 1973 or 1974 analytic studies found evidence of reduced recidivism associated with the referral of clients to alcohol safety schools.

Program Level Evaluation of Alcohol Safety Schools

The presentation of effectiveness analyses in the individual analytic studies, and the summary of these analyses in the previous section tends to treat the alcohol safety school as a single treatment modality which employs a relatively standard set of procedures in order to accomplish the re-education or rehabilitation of court referred clients. Inspection of the individual modality descriptions obtained for each site (see Volume I of the present report) reveals, however, that a wide variety of educational and therapeutic procedures have been assigned the label--alcohol safety school. In some instances substantially different

treatment programs within the same site are all described by this common label. In the Phoenix ASAP, for example, three types of educational programs including a literature only program, a one-session educational program, and a four-session program are all referred to as "schools."

To the extent that rehabilitation modalities designated as schools do vary substantially from site to site (or within sites), it might be anticipated that the simple pooling of these treatment programs, for program level analysis, may mask important effects. What appears to be required as a first step in the program level consideration of this class of ASAP rehabilitation countermeasures is a useful taxonomy of alcohol safety schools which considers structural and functional differences between these commonly labeled treatment modalities.

One approach to the development of such a taxonomy is offered by Reis¹⁹ and Nichols and Reis.²⁰ Descriptive data, collected from 27 ASAP rehabilitation subsystems, were used to formulate this model. Information relative to the physical characteristics and behavioral activities of 76 modalities was summarized by a five variable profile. Each modality profile included measures of:

1. Information Transmission (proportion of total time)
2. Participant-Leader Interaction (proportion of total time)
3. Participant-Participant Interaction (proportion of total time)
4. Total Exposure Time (number of minutes)
5. Session Size (number of clients).

The 76 modality profiles were first subjected to a principal components analysis in order to define a common measure of school characteristics. The greatest characteristic root accounted for 49% of the total variance. This first root had high negative loadings for information transmission and average session size,

¹⁹Reis, op. cit., p. 5.

²⁰Nichols, J. L. and Reis, R. E. One model for the evaluation of ASAP rehabilitation effort. National Technical Information Service, DOT-HS-801-244, Springfield, Virginia, 1974.

and high positive loadings for participant-participant interaction and total exposure time. Factor scores were obtained for each modality as a weighted composite of the five profile variables. Hierarchical clustering techniques were then applied to the factor scores obtained for each of 44 a priori defined alcohol safety schools to further delineate homogeneous groups of schools.

The hierarchical clustering algorithm developed by Ward²¹²² was used to order the 44 schools into groups having similar factor scores. The modalities used in the clustering analysis are presented in Table 15. Three groups were defined.

Type 3 schools were characterized by large session size, a didactic approach and a focus on retraining or educational activities.

Type 2 schools were less education oriented than Type 3 schools. In addition, these modalities handled smaller sized sessions and devoted more time to participant-leader interaction.

Type 1 schools used counseling and retraining techniques approximately equally. Characteristically, these modalities handled smaller groups of people for a longer duration than either Types 2 or 3. Participant to participant interaction was stressed. The linkage diagram for the three school types is shown in Figure 19.²³

Analyses contained in the present section utilized the three-group taxonomy structure defined above in the program level assessment of school effectiveness. The cumulative survival rate,²⁴ a corollary of arcsine cumulative recidivism, was used as a measure of treatment performance. Cumulative survival rate tables were constructed for a subset of individual modalities representing each of the three school groups.

²¹Ward, J. H. Hierarchical grouping to optimize an objective function. American Statistical Association Journal, 1963, 58, 236-244.

²²Veldman, D. J. Fortran Programming for the Behavioral Sciences. New York: Holt, Reinhart and Winston, pp. 308-317.

²³Reis, op. cit., p. 5.

²⁴Cutler and Ederer, op. cit., p. 53.

TABLE 15. A LISTING OF MODALITIES BY NAME AND FACTOR SCORES.

Modality Code	Description	Factor Scores
*VT01AS	Alcohol Impaired Drivers School	.3582
AZ01AS	Phoenix DWI School - four session version	-1.7765
AZ02AS	Phoenix DWI School - one session version	-2.6183
AR01AS	Attitude Formation Seminar	-.7928
FL01AS	DWI Counterattack Inc.	-.4910
GA01AS	Traffic Improvement Program	-.4035
IN01AS	Offender Education Program	-.2707
KS01AS	Phase II Instructional School - two week	.4414
KS02AS	Phase I Instructional School - one week	-.0311
KS03AS	ATC Group Level I, Educational, (NIAAA)	.2691
LA01AS	Alcohol Safety School	-1.7857
ME01AS	Alcohol Safety Action Drivers School	-.7021
MD01AS	Combination Level I School and Level II Group Therapy, County	-.4895
MA01AS	Alcohol Safety Re-education Program	.0990
MN01AS	Alcohol Safety School/DWI Course	-.9123
MN02AS	Chalk Talks	-1.4511
MO01AS	School for Alcohol Safety, Large Groups	-.8004
MO02AS	School for Alcohol Safety, Small Groups	.5634
NB01AS	Drinking Drivers School/DWI Class	-1.2006
NB02AS	High Risk Potential Class	-.0935
NB03AS	Court Re-education Class	-.8506
NB04AS	Youthful Offenders Class	-.1908
NH01AS	Driver Retraining School	-.0063
OH01AS	Driver Improvement School	-1.1328
OH02AS	Group Education for Behavior Modification	-.0097
OK01AS	Adult Behavior Modification School	.9934
SC01AS	Alcohol Traffic Safety School - 1972, 1973, Quarters 1, 2	-.4885
**SC02AS	Alcohol Traffic Safety School - 1973, Quarters 3, 4	.1267
SD01AS	Driver Improvement School	-1.2233
SD02AS	Problem Drinker Driver Classes	-.2205
TX01AS	Alcohol Information and Driver Education School	-.5462
VA01AS	Driver Improvement School - eight week version	-.3443
VA02AS	Driver Improvement School - weekend version	.1032
VA03AS	Fairfax Alcohol Community Education	.1664
CA01AS	Les Roberts DWI School, El Monte	-.8972
CA02AS	ASAP Funded Alcohol Safety Schools, Downtown, Van Nuys	-1.0728
CA03AS	Spanish Speaking DWI School, East L.A., Downtown	-.8472
CA04AS	Alcohol Counseling Associates, Mini ASAP	.0570
ID01AS	Court Alcohol School	.4700
IA01AS	School for Drinking Drivers	-.7112
IA02AS	Behavior Modification School	.5015
IA03AS	Juvenile Alcohol School	-.3782
PR01AS	DWI Driver Improvement School	-.2597
UT01AS	Drinking Driver Education	-.4511

* U. S. Post Office Department two-letter state abbreviations
 ** Major change in personnel

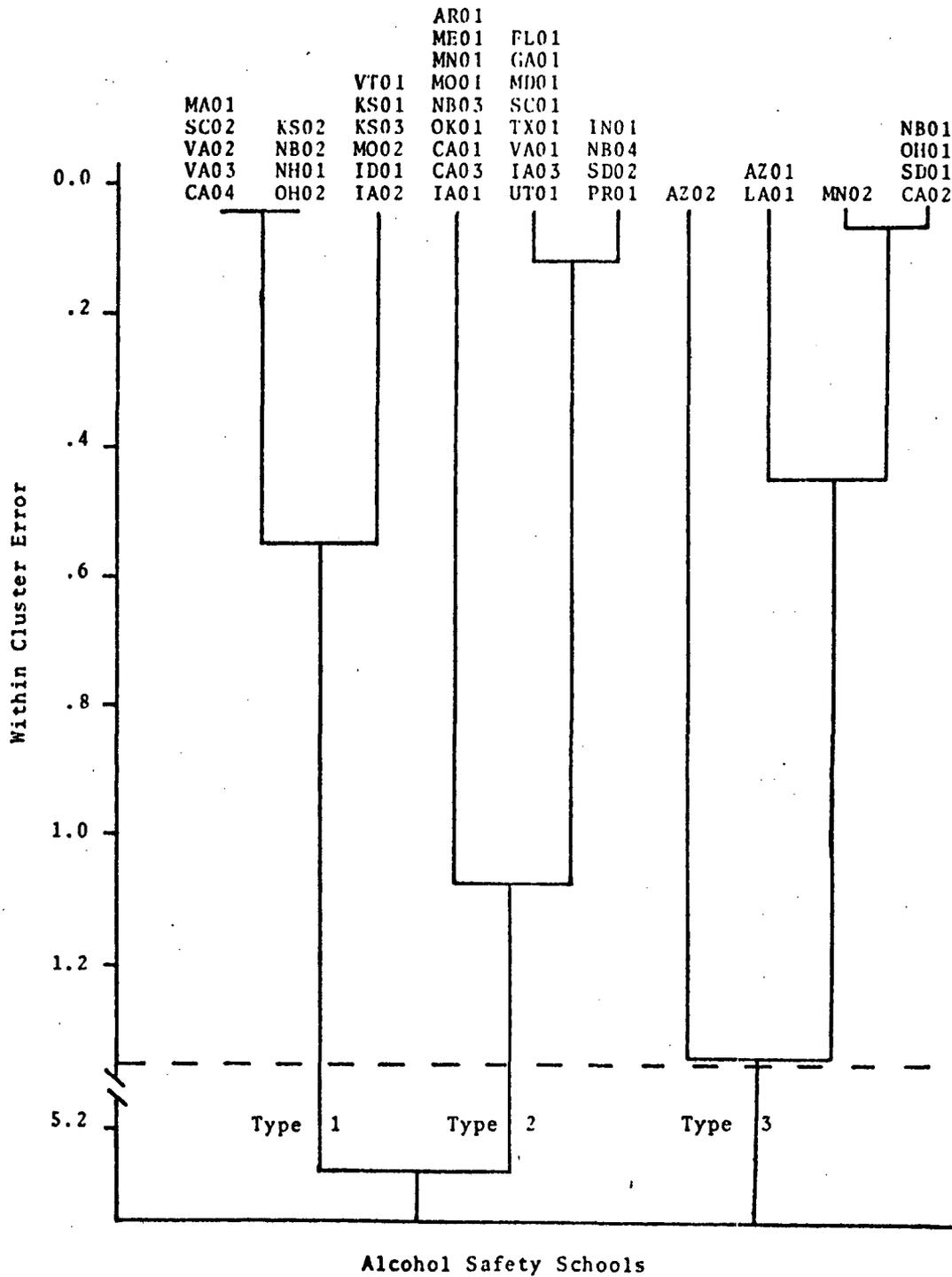


FIGURE 19. LINKAGE TREE DIAGRAM OF HIERARCHICAL CLUSTERING ANALYSIS: FACTOR SCORES

Table 16 identifies the subset of Reis'²⁵ schools used in these analyses. Separate analyses were conducted for all drinker types combined and for each of the NHTSA drinker classifications.

All Drinker Types. A graphic representation of cumulative survival rates for the composite of all drinker types entering the three school types is shown in Figure 20. These cumulative survival rates are calculated using the composite of the modality recidivism data reported in "Table 15." Table 17 presents the data plotted in the survival rate curves of Figure 20. Student's t tests were calculated at each interval. Intervals one through four are successive quarter years whereas intervals five through eight are biannual (two quarter) periods. The results of the t tests indicate that the cumulative survival curves are significantly different at each interval. However, interpretation of these differences is tempered by several factors. First, the large effective sample size for each comparison makes the test extremely sensitive to differences between groups. Other considerations include group size, the effect of combining drinker types, and characteristics of individual projects to name but a few. It is important to understand that the analyses presented here can by no means be construed to measure absolute effectiveness of alcohol safety school or school treatment. Additionally, caution must be exercised in the interpretation of relative treatment effectiveness.

The profile analysis examined the mean cumulative survival rates for each school type at each of eight quarter year intervals. It is important to understand that the data subjected to multiple profile analyses are not the same as those represented in the pooled cumulative survival rate curves.

The results of the profile analysis for the composite drinker type survival rates are shown in Table 18. The multivariate test of the parallelism hypothesis is non-significant ($p = 0.524$) suggesting that the shapes of the group profiles were similar.

The significant test of the flatness hypothesis indicates a non-zero slope for the given mean vector of the three schools. This is to be expected since survival rates usually deteriorate with time. Examination of the profiles shown in Figure 21 supports these conclusions. The univariate test of between group differences yielded a

²⁵Reis, op. cit., p. 5.

TABLE 16. A LISTING OF MODALITIES INCLUDED IN ASAS TREATMENT EFFECTIVENESS ANALYSES.

Code	Description	Drinker Types for Which Table 15 Data Was Reported
Type 1 Schools		
VT01AS	Vermont: CRASH School	PD, NPD
SC02AS	South Carolina: Alcohol Traffic Safety School	PD, UI, NPD
NH01AS	— New Hampshire: Driver Retraining School	PD
ID01AS	Idaho: Court Alcohol School	PD, UI, NPD
MO02AS	Missouri: School for Alcohol Safety, Small Group	PD, UI, NPD
KS01AS	Kansas: Instructional School	PD, UI, NPD
KS02AS	Kansas: Instructional School	PD, UI, NPD
Type 2 Schools		
ME01AS	Maine: Alcohol Safety Action Drivers School	PD, UI
TX01AS	Texas: Alcohol Information and Driver Education School	PD, UI, NPD
MN01AS	Minnesota: Alcohol Safety School/DWI Class	PD, UI, NPD
MO01AS	Missouri: School for Alcohol Safety, Large Group	PD, UI, NPD
SD02AS	South Dakota: Problem Drinker Driver Classes	PD, UI, NPD
IA01AS	Iowa: School for Drinking Drivers	PD, UI, NPD
IA03AS	Iowa: Juvenile Alcohol School	UI, NPD
OK01AS	Oklahoma: Adult Behavior Modification School	PD, UI, NPD
IN01AS	Indiana: Offender Education Program	UI, NPD
Type 3 Schools		
AZ01AS	Arizona: Phoenix DWI School (A/PW)	PD, UI, NPD
AZ02AS	Arizona: Phoenix DWI School (A/PW)	PD, UI, NPD
LA01AS	Louisiana: Alcohol Safety School	PD, NPD
SD01AS	— South Dakota: Driver Improvement School	NPD
MN02AS	— Minnesota: Chalk Talks	PD, UI, NPD
OH01AS	Ohio: Driver Improvement School	PD, UI, NPD

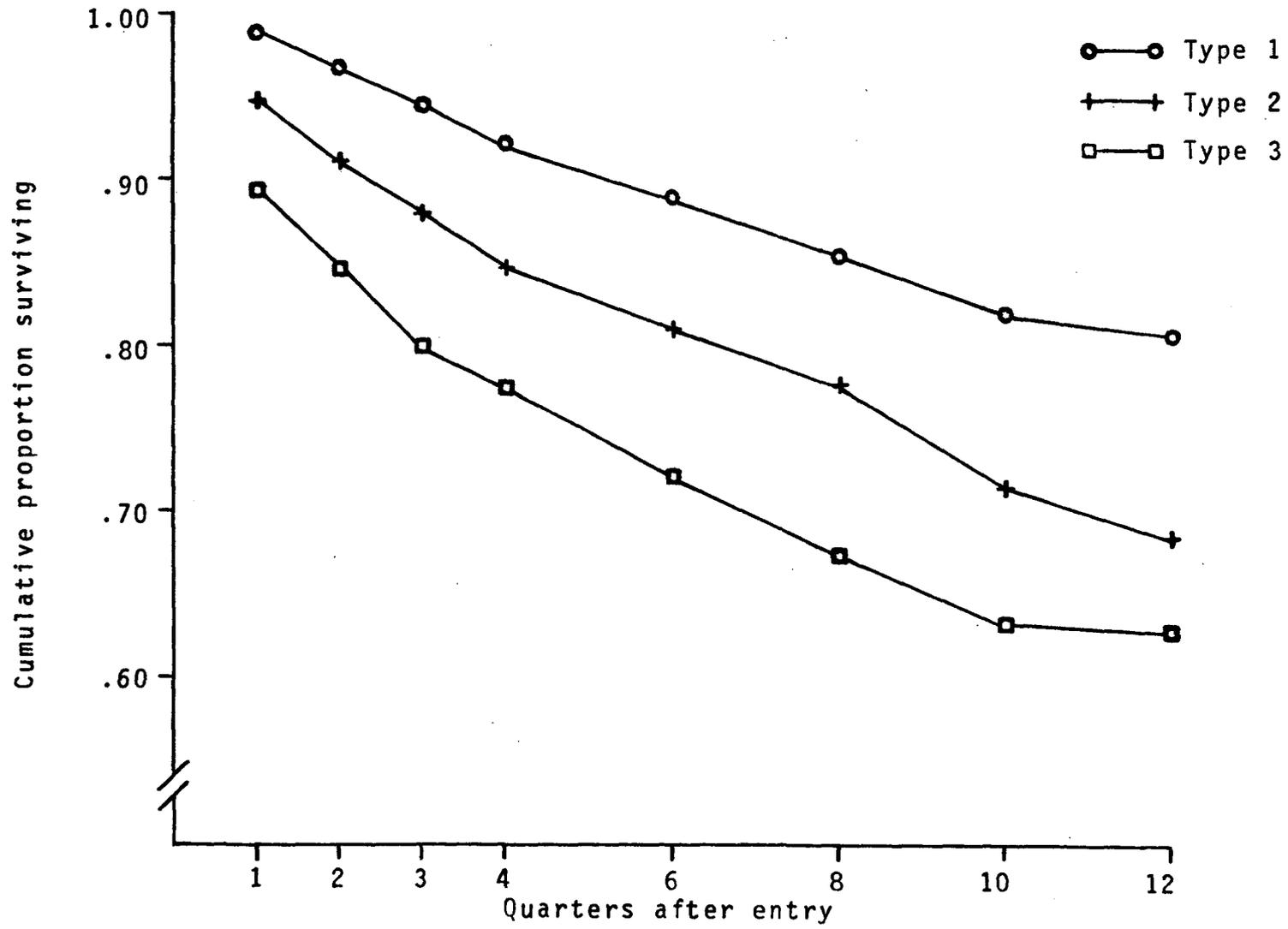


FIGURE 20. COMPARISON OF CUMULATIVE SURVIVAL RATE CURVES FOR THREE TYPES OF EDUCATIONAL TREATMENT MODALITIES.

TABLE 17. CUMULATIVE SURVIVAL RATE TABLE FOR ALL DRINKER TYPES ENTERING ALCOHOL SAFETY ACTION SCHOOLS TYPES 1, 2, AND 3.

		Interval After Entry							
		1	2	3	4	5 ⁺	6 ⁺	7 ⁺	8 ⁺
<u>Cumulative Survival Rate</u>									
	Type 1	.98962	.96851	.94623	.92204	.88947	.85514	.81958	.80985
	Type 2	.94786	.91243	.88143	.84809	.81256	.77536	.71622	.68670
	Type 3	.89498	.84740	.79738	.77562	.72050	.67417	.63206	.62866
<u>Standard Errors</u>									
	Type 1	.0011613	.0021105	.0028795	.0036616	.0048276	.0065064	.0097602	.0136573
	Type 2	.0017141	.0022128	.0025752	.0029513	.0034149	.0041496	.0063752	.0097468
	Type 3	.0041291	.0048810	.0055068	.0057627	.0064809	.0073392	.0090345	.0096053
<u>Effective Sample Size</u>									
	Type 1	7614	4689	2710	1858	1462	877	418	63
	Type 2	16820	7349	4948	4178	3442	2537	1736	416
	Type 3	5513	2113	1831	799	1572	1117	717	58
	t ₁₋₂	20.169*	18.339*	16.774*	15.724*	13.006*	10.338*	8.866*	7.339*
	t ₁₋₃	21.349*	22.775*	23.953*	21.445*	20.909*	18.451*	14.099*	10.852*
	t ₂₋₃	11.828*	12.134*	13.826*	14.219*	12.566*	12.002*	7.611*	4.241*

* p < .001

⁺ Interval 5, 6, 7, and 8 represent quarters 5-6, 7-8, 9-10, 11-12, respectively.

TABLE 18. CHANGE IN CUMULATIVE SURVIVAL RATES OVER EIGHT QUARTERS OF EXPOSURE TIME FOR THREE ALCOHOL SAFETY SCHOOL TYPES, ALL DRINKER TYPES

A. Results of Profile Analysis

1. Test of Parallel Profiles:

Multivariate F = 0.970 df = 10 and 82
p = 0.524

2. Test of Flatness of Grand Mean Vector:

Multivariate F = 15.964 df = 5 and 41
p < .001

3. Test of Between Group Differences:

Univariate F = 0.139 df = 2 and 45
p = 0.139

B. Group Means Computed from Individual Modality Survival Rates

	Interval					
	1	2	3	4	5	6
Type 1	.9904	.971	.9467	.923	.8601	.8263
Type 2	.9885	.9745	.9511	.9283	.8888	.8679
Type 3	.9565	.925	.9075	.8866	.8447	.8244

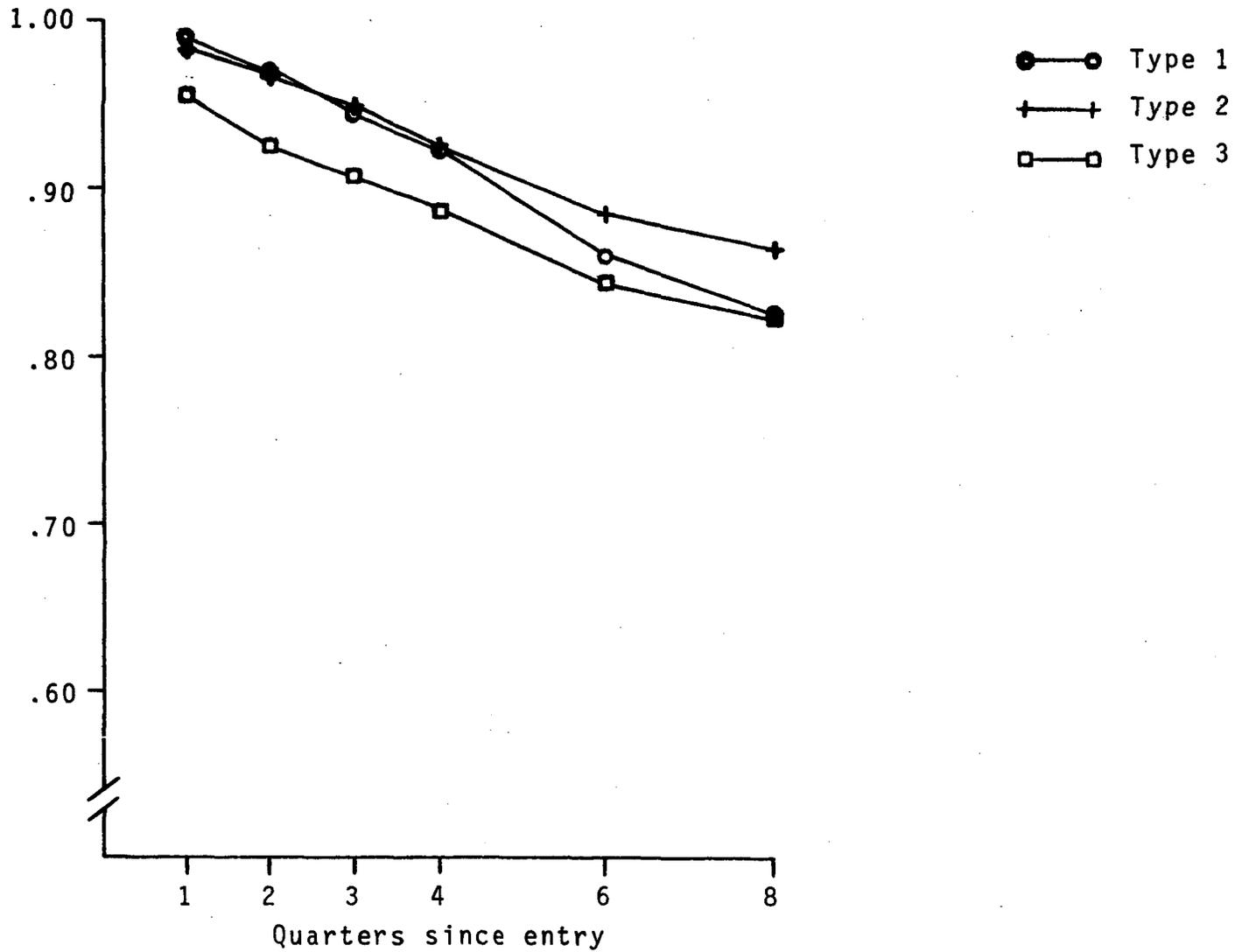


FIGURE 21. COMPARISON OF EIGHT QUARTERS MEAN SURVIVAL RATE OF ALL DRINKER TYPES ATTENDING TYPE 1, TYPE 2, AND TYPE 3 EDUCATIONAL TREATMENT MODALITIES

non-significant result ($p = .139$).

Although the results of the profile analysis do not reveal statistically significant differences between the three school types, it is interesting to note that the performance of the Type 3 schools was inferior to that of Types 1 and 2 schools for both analyses.

Problem Drinkers. The cumulative survival rates for problem drinkers in each of the three school types over eight quarters exposure time indicate a significant difference between the school types (Table 19). The problem drinker survival rate for Type 3 schools displays increasing negative divergence from Type 1 and Type 2 survival rate curves (Figure 22). All curves are significantly different at each interval. The magnitude of the differences would suggest Type 3 schools are the least effective of the three school types in affecting the rearrest rate of problem drinkers. This conclusion is expected when the didactic approach and large class size characterizing Type 3 schools are considered.

Assessment of change in problem drinker cumulative survival rates by means of the multiple profile analysis for the three school types yielded the results presented in Table 20. The multivariate test of parallelness is non-significant ($p = .695$) indicating that the shapes of the profiles are similar. The multivariate test for flatness (i.e., zero slope) was significant ($F = 28.445$, $df = 5$ and 8 , $p < .001$). Examination of the plotted profiles in Figure 23 supports the expected result of non-zero slope of the grand mean vector. The levels hypotheses test is non-significant ($p = .195$) indicating the decrease in the cumulative survival rate was not significantly different between school types. Although the results of these analyses do not statistically support the conclusion of differential treatment effectiveness suggested by the cumulative survival analysis, the extreme divergence of the Type 3 school profile from those of the Type 1 and Type 2 schools is consistent between analyses. It would appear on the basis of both analyses that problem drinkers exposed to Type 3 schools are substantially more prone to rearrest than problem drinkers referred to Type 1 or Type 2 schools.

Unidentified Drinkers. Due to the quality of the available data, the cumulative survival rates for unidentified drinkers treated by the three school types were calculated for only six quarters of exposure time (Table 21). It is interesting to note that the unidentified drinker survival

TABLE 19. CUMULATIVE SURVIVAL RATE TABLE FOR PROBLEM DRINKERS ENTERING ALCOHOL SAFETY ACTION SCHOOLS TYPES 1, 2, AND 3.

		Interval After Entry					
		1	2	3	4	5 ⁺	6 ⁺
<u>Cumulative Survival Rate</u>							
	Type 1	.9904	.9659	.9404	.9171	.8766	.8287
	Type 2	.9216	.8841	.8490	.8170	.7722	.7332
	Type 3	.7342	.6316	.5315	.5011	.4477	.4133
<u>Standard Errors</u>							
	Type 1	.0016074	.003145	.004304	.005313	.0071598	.0098168
84	Type 2	.0030827	.0038286	.0043498	.0048138	.0055553	.0065181
	Type 3	.0097933	.0107610	.0110688	.0111208	.0114994	.0125068
<u>Effective Sample Size</u>							
	Type 1	3663	2443	1386	857	823	537
	Type 2	7201	2955	2015	1563	1681	1129
	Type 3	2035	1038	1088	436	720	454
<u>T Tests*</u>							
	t ₁₋₂	19.789*	7.296*	7.696*	13.959*	11.5203*	8.104*
	t ₁₋₃	25.815*	29.818*	34.43*	33.753*	31.662*	26.127*
	t ₂₋₃	18.253*	22.109*	26.697*	26.069*	25.409*	22.682*

* All t values are significant, $p < .001$

+ Interval 5 is comprised of quarters 5 and 6, interval 6 is comprised of quarters 7 and 8.

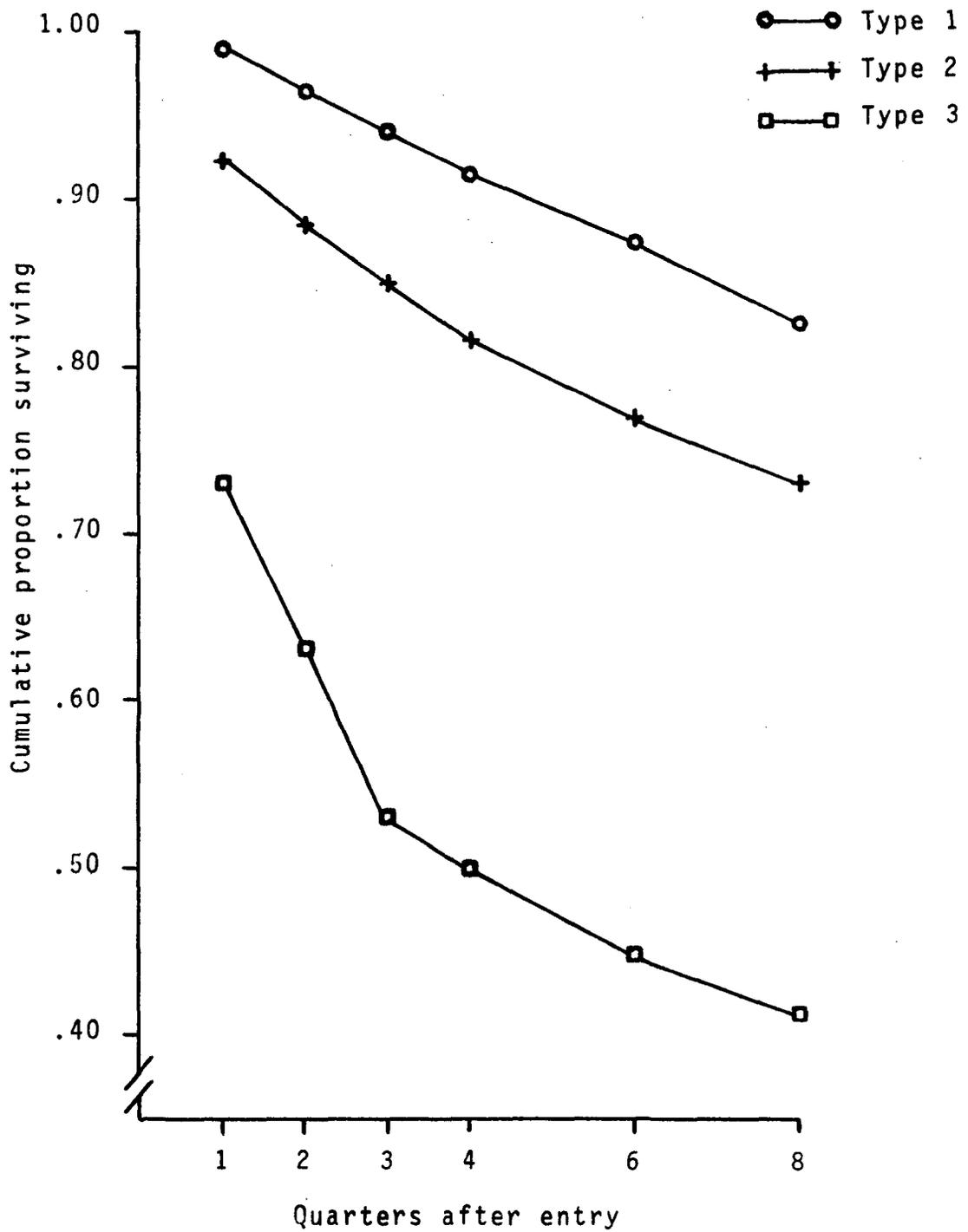


FIGURE 22. CUMULATIVE SURVIVAL RATE CURVES OF PROBLEM DRINKERS ATTENDING ALCOHOL SAFETY SCHOOL.

TABLE 20. CHANGE IN CUMULATIVE SURVIVAL RATES
OVER EIGHT QUARTERS OF EXPOSURE TIME FOR THREE
ALCOHOL SAFETY SCHOOL TYPES, PROBLEM DRINKERS

A. Results of Profile Analysis

1. Test of Parallel Profiles:

Multivariate $F = 0.784$ $df = 10$ and 16
 $p = 0.645$

2. Test of Flatness of Grand Mean Vector:

Multivariate $F = 28.445$ $df = 5$ and 8
 $p < .001$

3. Test of Between Group Differences:

Univariate $F = 1.875$ $df = 1$ and 12
 $p = 0.195$

B. Group Means Computed from Individual Modality
Survival Rates

	Interval					
	1	2	3	4	5	6
Type 1	.98775	.9644	.9366	.91825	.88786	.839
Type 2	.98186	.965	.94757	.92886	.8658	.8304
Type 3	.9285	.88975	.86975	.8335	.78375	.77525

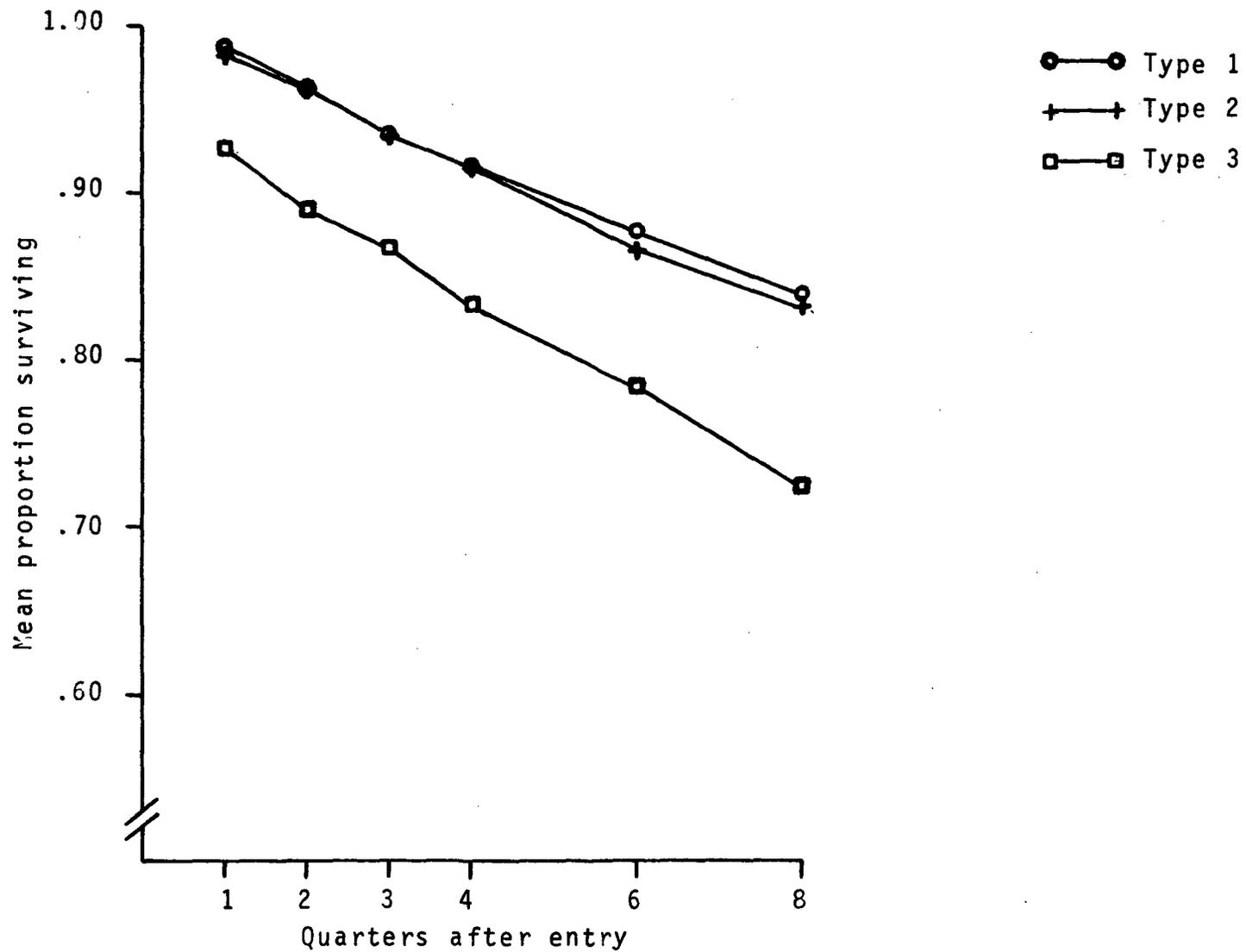


FIGURE 23. COMPARISON OF EIGHT QUARTERS MEAN SURVIVAL RATES OF PROBLEM DRINKERS ATTENDING THREE TYPES OF EDUCATIONAL TREATMENT MODALITIES.

TABLE 21. CUMULATIVE SURVIVAL RATE TABLE FOR UNIDENTIFIED DRINKERS ENTERING ALCOHOL SAFETY ACTION SCHOOLS TYPES 1, 2, AND 3.

		Intervals After Entry				
		1	2	3	4	5 ⁺
<u>Cumulative Survival Rates</u>						
	Type 1	.9885	.9674	.9444	.9210	.8912
	Type 2	.9209	.8625	.8115	.7463	.7069
	Type 3	.9281	.9099	.8835	.8492	.7885
<u>Standard Errors</u>						
88	Type 1	.0027039	.0045302	.0059737	.0074978	.0102352
	Type 2	.0043181	.0056177	.0065064	.0075684	.0083758
	Type 3	.0309947	.0353272	.0430357	.0533150	.0765977
<u>Effective Sample Size</u>						
	Type 1	1560	1014	650	430	300
	Type 2	3907	1881	1314	1289	713
	Type 3	70	15	15	13	11
<u>T Tests</u>						
	t ₁₋₂	13.268*	14.536*	15.046*	16.398*	13.935*
	t ₁₋₃	1.941	1.6144	1.402	1.334	1.329
	t ₂₋₃	-.2301	-1.325	-1.654	-1.911	-.295

* p < .001

+ Interval 5 represents quarters 5-6.

rate for Type 3 schools does not display the rapid deterioration found for problem drinkers assigned to this modality (Figure 24). This result suggests the possibility of a confounding relationship between drinker type and school effectiveness. Examination of the t test results indicate that the cumulative survival rates for Type 1 schools differs significantly from those of Type 2 and 3 schools. However, caution in the interpretation of these results must again be stressed.

The results of the multiple profile analysis for unidentified drinkers are presented in Table 22. The multivariate F of .555 (df = 10 and 18) is not statistically significant (p = .829) indicating that the profiles for the three school types are not non-parallel across the eight quarters of exposure time. The plotted profiles found in Figure 25 support this conclusion. Although the multivariate test of zero slope is not statistically significant (p = .044), univariate analyses of the first, third and fourth intervals reveal significant slope for those vector segments. The univariate test of between group differences is non-significant (p = .674) suggesting the non-zero differences found in the univariate analysis of the flatness hypothesis are consistent for all profiles. No differences in treatment effectiveness for the three school types can be inferred from these analytic results.

Non-Problem Drinkers. Non-problem survival rate curves for the three types of schools (Figure 26) exhibit a noticeably different pattern than that shown by problem and unidentified drinkers. In this set of survival rates the largest difference between school types is 3% for Type 2 and Type 1 at the sixth quarter. It is also interesting to note the relative position of the school types' cumulative survival rate curves. Apparently, non-problem drinkers are not adversely affected by Type 3 schools as is the case for problem drinkers. In addition, non-problem drinkers attending Type 2 schools show the most consistent and highest survival rate of the three school types. Results of t test comparisons (Table 23) indicate little significant difference exists between schools. Type 1 school exhibits a significant difference at intervals 4 and 5 while Type 3 differs significantly from Types 2 and 1 at intervals 5 and 6. The magnitude of the differences and the overall similarity of the survival curves suggest that the type of school treatment to which a non-problem drinker is exposed should have little effect on his/her survival rate over time. The multiple profile analysis for non-problem drinkers is summarized in Table 24.

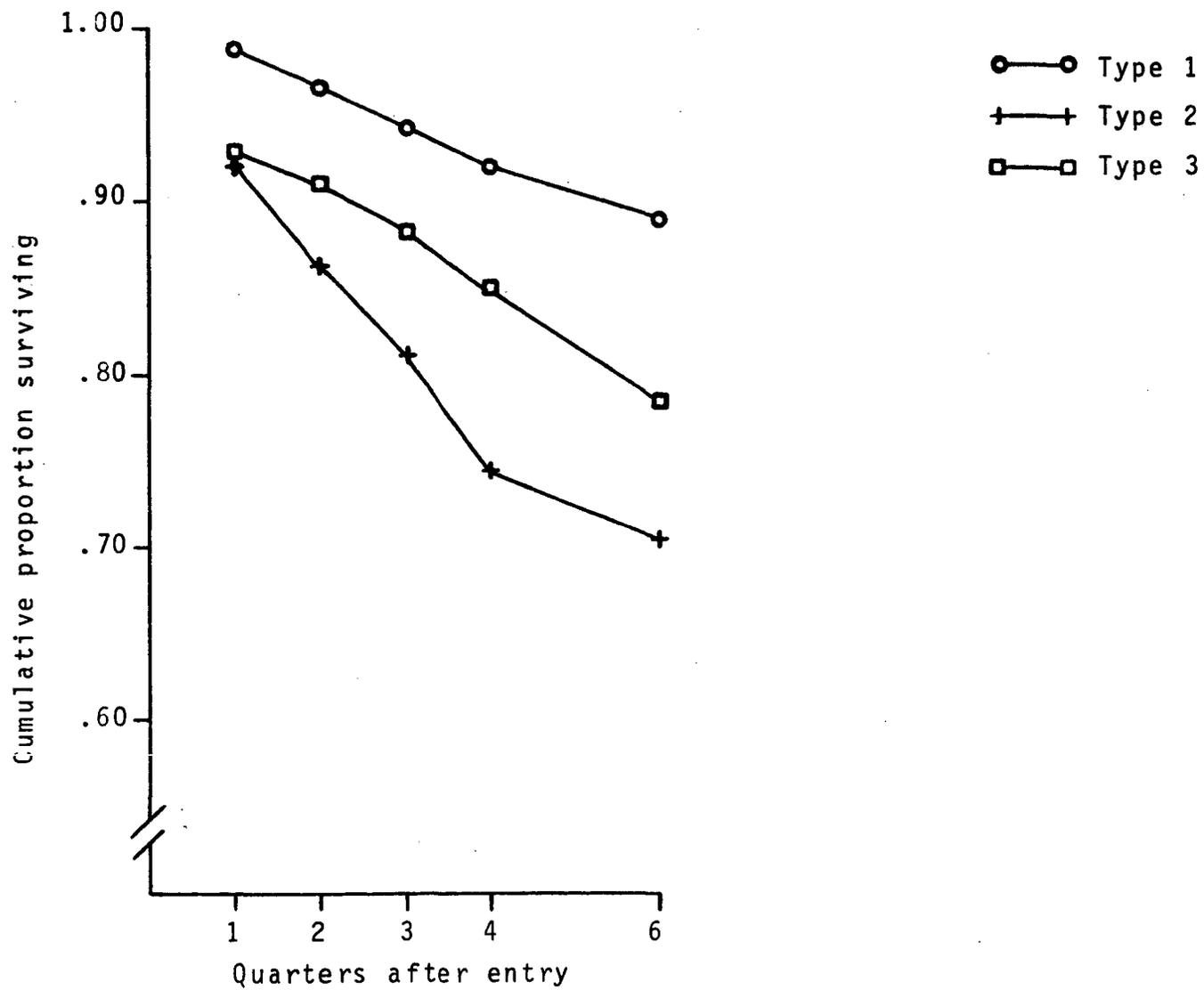


FIGURE 24. COMPARISON OF CUMULATIVE SURVIVAL RATE CURVES OF UNIDENTIFIED DRINKERS ATTENDING ALCOHOL SAFETY SCHOOL.

TABLE 22. CHANGE IN CUMULATIVE SURVIVAL RATES OVER EIGHT QUARTERS OF EXPOSURE TIME FOR THREE ALCOHOL SAFETY SCHOOL TYPES, UNIDENTIFIED DRINKERS

A. Results of Profile Analysis

1. Test of Parallel Profiles:

Multivariate F = 0.558 df = 10 and 18
p = 0.829

2. Test of Flatness of Grand Mean Vector:

Multivariate F = 3.668 df = 5 and 9
p = .044

	<u>Univariate MS Parallelism</u>	<u>MS Error</u>	<u>Univariate F</u>	<u>p</u>
Qtr 1-2	.00459007	.0004988	9.202	.009
Qtr 2-3	.0216825	.00525	4.130	.061
Qtr 3-4	.0199516	.002095	9.524	.009
Qtr 4-6	.026325	.0021	12.534	.004
Qtr 6-8	.02560	.00416	5.798	.030

3. Test of Between Group Differences:

Univariate F = 0.413 df = 2 and 13
p = .674

B. Group Means Computed from Individual Modality Survival Rates

	Interval					
	1	2	3	4	5	6
Type 1	.9896	.969	.938	.9077	.855	.800
Type 2	.9893	.978	.938	.9049	.866	.8494
Type 3	.952	.9217	.9133	.9053	.8633	.829

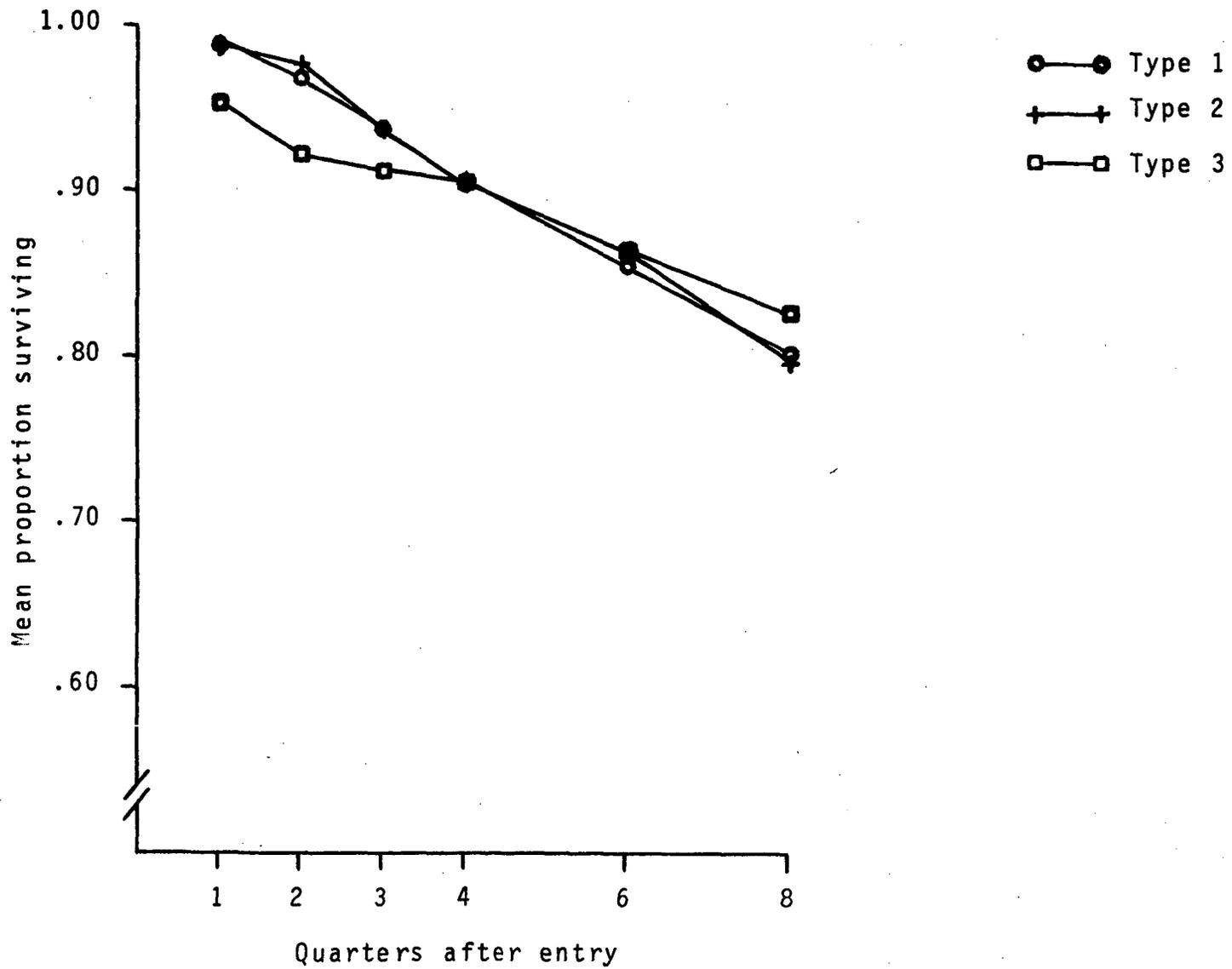


FIGURE 25. COMPARISON OF EIGHT QUARTERS MEAN SURVIVAL RATE FOR UNIDENTIFIED DRINKERS ATTENDING THREE TYPES OF EDUCATIONAL TREATMENT MODALITIES.

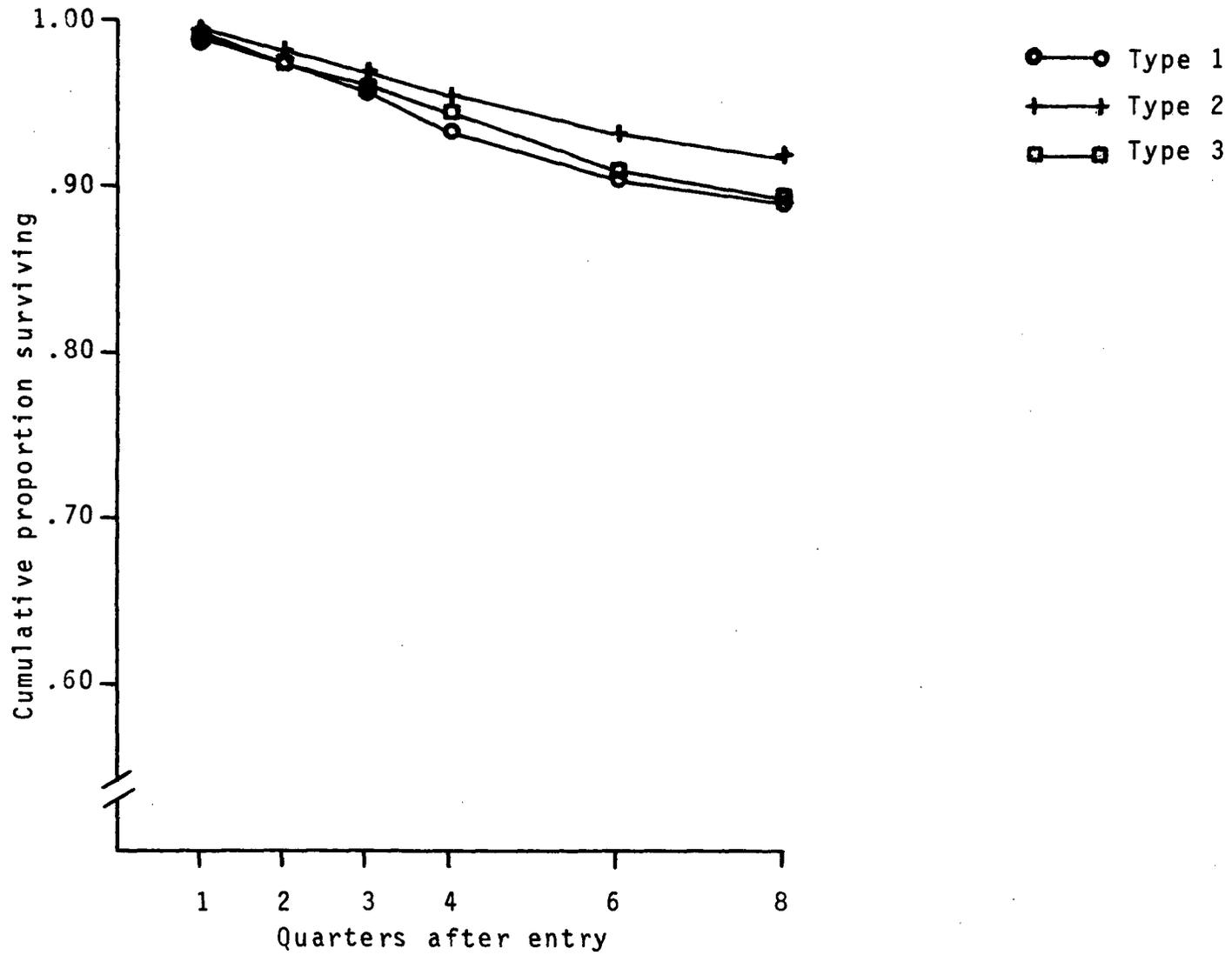


FIGURE 26. COMPARISON OF CUMULATIVE SURVIVAL RATE CURVES OF NON-PROBLEM DRINKERS ATTENDING ALCOHOL SAFETY SCHOOL.

TABLE 23. CUMULATIVE SURVIVAL RATE TABLE FOR NON-PROBLEM DRINKERS ENTERING ALCOHOL SAFETY ACTION SCHOOLS TYPES 1, 2, AND 3.

	Interval After Entry					
	1	2	3	4	5 ⁺	6 ⁺
<u>Cumulative Survival Rate</u>						
Type 1	.9896	.9751	.9589	.9326	.9045	.8914
Type 2	.9937	.9817	.9693	.9552	.9345	.9188
Type 3	.9903	.9756	.9605	.9452	.9124	.8932
<u>Standard Errors</u>						
Type 1	.0020257	.0032344	.0043226	.0059567	.007923	.0094338
Type 2	.0010469	.0018084	.0023767	.002962	.0038557	.0048080
Type 3	.0016772	.0026812	.0034416	.0041161	.0054777	.0064166
<u>Effective Sample Size</u>						
Type 1	2504	1380	873	754	465	159
Type 2	5713	3658	2195	1639	1423	718
Type 3	3409	2040	1286	924	1116	500
<u>T Tests</u>						
t ₁₋₂	-1.798	-1.781	-2.108	-3.397*	-3.405*	-2.588*
t ₁₋₃	-.2662	-.119	-.2896	-1.7402	-.8202	-.1578
t ₂₋₃	1.721	1.886	2.104	1.972	3.299*	3.193*

* p < .001

+ Intervals 5 and 6 represent quarters 5-6 and 7-8.

TABLE 24. CHANGE IN CUMULATIVE SURVIVAL RATES OVER EIGHT QUARTERS OF EXPOSURE TIME FOR THREE ALCOHOL SAFETY SCHOOL TYPES, NON-PROBLEM DRINKERS

A. Results of Profile Analysis

1. Test of Parallel Profiles:

Multivariate F = 0.677 df = 10 and 20
p = .734

2. Test of Flatness of Grand Mean Vector:

Multivariate F = 6.036 df = 5 and 10
p = .008

	<u>Univariate MS Parallelism</u>	<u>MS Error</u>	<u>Univariate F</u>	<u>p</u>
Qtr 1-2	.00217	.0000982	22.115	.001
Qtr 2-3	.00366	.0001752	20.916	.001
Qtr 3-4	.00262	.0002089	12.559	.003
Qtr 4-6	.09081	.013214	3.088	.098
Qtr 6-8	.00239	.0001251	19.096	.001

3. Test of Between Group Differences:

Univariate F = 1.636 df = 2 and 14
p = .229

The change in non-problem drinker mean survival rates for the three school types are plotted in Figure 27. The results of this analyses indicate that while the profiles are not non-parallel ($p = .734$), non-zero slope was found across the eight quarter period ($F = .6036$, $df = 5$ and 10 , $p = .008$) and this decrease in survival rate was consistent between groups ($p = .229$). No between school differences in survival rates were detected by this analysis.

On the basis of both the survival rate and profile analyses, it would appear that problem drinker recidivism (or survival without rearrest) is not influenced by the type of alcohol safety school utilized as a referral resource. In the absence of an adequate no-treatment comparison group with which to compare the performance of school groups, it cannot be inferred that schools do not affect the recidivist probability of non-problem drinkers. Neither can it be suggested that all school types are effective in preventing or delaying recidivism.

EFFECTIVENESS OF NON-SCHOOL TREATMENT MODALITIES

Apart from the alcohol safety schools, most of the rehabilitative services received by ASAP clients were provided by community based rehabilitation programs. The characteristics of these programs are described in detail in Volume I of the present report.

Although the project level evaluations of rehabilitation effectiveness contained in the annual Analytic Study No. 6 did, in many instances, report assessments of the effectiveness of these rehabilitation programs, the specific treatment programs evaluated tended to be unique to the particular projects. As a consequence a program level summary of these analytic study results is not attempted in the present report. The reader is referred to annual analytic study summary reports prepared under the present contract for a review of individual project's results.²⁶⁻²⁷⁻²⁸ The approach taken to the evaluation of the effectiveness of non-school modalities instead employs the same general methodology used in the program level evaluation of the effectiveness of alcohol safety schools in the preceding section.

²⁶Ellingstad and Struckman, op. cit., p. 5.

²⁷Struckman, et al., op. cit., p. 6.

²⁸Ellingstad, op. cit., p. 5.

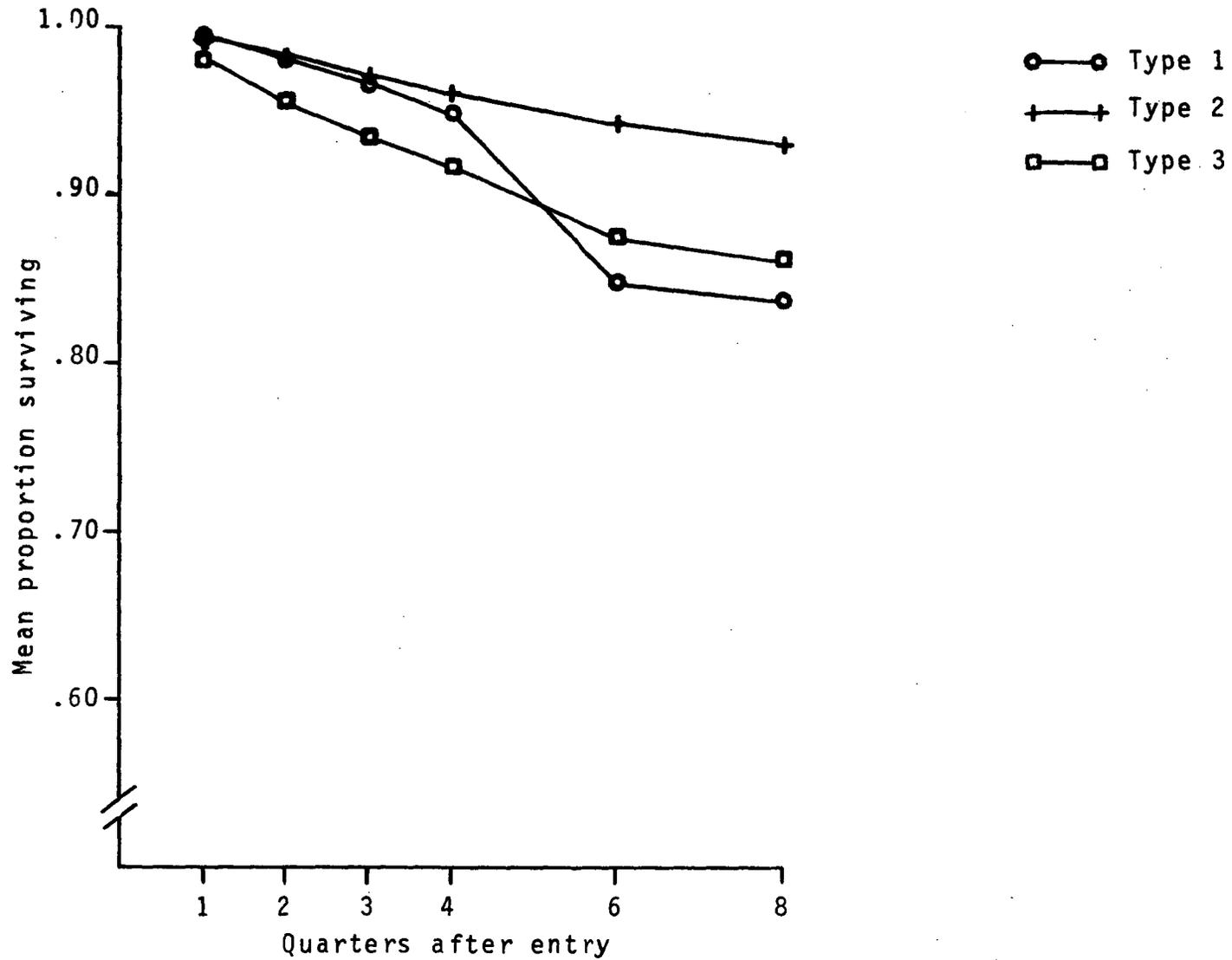


FIGURE 27. COMPARISON OF EIGHT QUARTERS MEAN SURVIVAL RATES FOR NON-PROBLEM DRINKERS ATTENDING EDUCATIONAL TREATMENT MODALITIES.

Development of a Treatment Taxonomy

In an attempt to objectively order non-school treatment modalities into homogeneous groups, a classification structure was formulated based on four measures of treatment intensity:

1. Average number of sessions.
2. Days between sessions.
3. Average length of sessions (number of minutes).
4. Average session size (number of persons).

These data were collected for 57 non-school treatment modalities. A modality was considered if its objectives were therapeutic or if more than half the treatment program utilized non-educational strategies. Chemotherapy programs were not included. Relevant information was extracted during the formulation of the project descriptions detailed in Volume I of this report. Modality scores on the four treatment intensity variables were subjected to the hierarchical clustering techniques described previously. Six clusters were defined. A listing of the modalities used in the cluster analysis is presented in Table 25. The raw scores, means and standard deviations of the grouped modalities are found in Table 26.

Group I is comprised of 24 modalities characterized by a moderate number of sessions lasting on the average just over two hours. These modalities handle small groups of people at each session. Generally, this group encompasses the more intensive group therapies and treatments.

Group II consists of 22 modalities characterized by a greater number of sessions of shorter average length than Group I. Larger groups of people participate in these modalities than in Group I. In the general case, this type of treatment includes some educational activity within the context of group therapy functions.

Group III is actually a single modality. Indiana's Behavior Modification is a ten session treatment program which handles, on the average, 80 persons per one hour session. The focus of this modality is divided nearly equally between counseling and educational activities.

Group IV contains the three group therapies offered by the South Dakota inpatient treatment facilities. Although these are residential treatment facilities, the group oriented therapy sessions meet daily for one hour of intensive group dynamics treatment.

TABLE 25. LISTING OF NON-SCHOOL MODALITIES
BY CODING AND CLUSTER MEMBERSHIP.

State Code	Modality Code	Treatment Type	Description
VT	ATAC	1	NIAAA Alcohol Counseling
PR	GRPT	2	Group Therapy
PR	FAMT	1	Family Therapy
DE	PDDP	2	Problem Drinker Driver Program
VA	DPEU	1	Diagnosis and Psychological Evaluation Unit
NC	GTRC	2	Group Therapy Randolph Clinic
GA	GTI	1	Group Therapy Phase I (7 weeks)
GA	GTII	2	Group Therapy Phase II Extended
SC	GRPT	1	Group Therapy
SC	FAMT	1	Family Therapy
SC	INDT	1	Individual Therapy
SC	INPT	5	Inpatient Treatment
FL	ASGT	2	ASAP Sponsored Group Therapy
FL	NIGT	2	NIAAA Sponsored Group Therapy
FL	GTYT	2	TACOA Sponsored Group Therapy and Youth Group Therapy
FL	CORE	1	TACOA Consultation Diagnosis and Referral
OH	BMOD	1	Group Education for Behavior Modification
IN	BMOD	3	Behavior Modification
IN	TPIT	1	Treatment Program: Individual Therapy

Table 25. Listing of Non-School Modalities by Coding and Cluster Membership (Continued)

State Code	Modality Code	Treatment Type	Description
LA	PDGT	2	ASAP Sponsored Group Therapy for Problem Drinkers
LA	IPST	1	Individual Psychotherapy
LA	TUGT	1	Tulane School of Social Work Group Therapy
LA	INPT	5	Inpatient Treatment
OK	ICC	2	Intermediate Care Center
OK	CAP	2	Community Action Program
OK	OKGC	2	Oklahoma City Community Center: Group Counseling
OK	SPSV	2	Special Services
AK	CPPD	1	Court Program for Problem Drinker Drivers
TX	ATP	1	NIAAA Alcohol Treatment Program
TX	DLII	2	Diagnosis and Level II Rehabilitation
MO	INDC	2	Individual Counseling
MO	CAP	2	Community Alcohol Program
NE	GRPC	1	Group Counseling
NE	IRC	1	Intake and Referral Center Individual Counseling
NE	INPT	5	Inpatient Treatment
IA	TPGT	2	Treatment Program: Group Therapy
IA	BMOD	2	Behavior Modification School
KS	ATII	1	Alcohol Treatment Center Level II Group Confrontation
KS	ATIII	1	Alcohol Treatment Center Level III AA Oriented Group Therapy
KS	ISII	2	Instructional School Level II Social-Emotional Therapy
KS	INPT	1	Inpatient Treatment
KS	WFC	1	Wichita Fellowship Club-Residential

Table 25. Listing of Non-School Modalities by Coding and Cluster Membership (Continued)

State Code	Modality Code	Treatment Type	Description
CO	GTIN	2	Group Therapy-Singles
CO	GTCP	2	Group Therapy-Couples
CO	CAPP	2	Counseling on Alcohol Problems Program
UT	VORE	1	Vocational Rehabilitation
SD	YANK	4	Inpatient - Yankton State Mental Hospital
SD	RVPK	4	Inpatient - River Park Center
SD	FTMD	4	Inpatient - Fort Meade V.A. Hospital
AZ	SBGP	1	Sobriety Group
AZ	KEY	1	Key Program
AZ	PRWK	2	Prevention Workshop
AZ	PORB	1	Volunteer Probation
ID	DCPI	6	Driver Improvement Counseling Program, 3 Mo.
ID	DCPII	6	Driver Improvement Counseling Program, 6 Mo.
ID	DCPIII	6	Driver Improvement Counseling Program, 9 Mo.
ID	DCPIV	6	Driver Improvement Counseling Program, 12 Mo.

TABLE 26. LISTING OF RAW DATA BY MODALITY

Modality	Number of Sessions	Days Between Sessions	Session Length	Session Size
Group I				
VT ATAC	12	3	120	8
VA DPEV	10	1	150	4
GA GTI	7	7	180	13
IN TPIT	10	7	60	1
AK CPPD	6	7	120	8
LA IPST	15	7	60	1
TX ATP	16	3	150	8
KS ATII	12	3	120	10
KS ATIII	12	3	120	10
UT VORE	6	7	120	4
AZ SBGP	3	7	60	15
AZ KEY	8	3	90	10
PR FAMT	12	3	90	5
SC INDT	7	7	60	1
SC GRPT	7	7	90	8
SC FAMT	7	7	60	1
OH BMOD	10	7	90	12
LA TUGT	10	7	90	9
NE GRPC	9	7	120	10
NE IRC	5	7	60	1
FL CORE	1	1	120	1
AZ PORB	24	7	60	60
KS INPT	30	1	480	1
KS WFC	21	1	446	1
Mean	10.833	5	129.833	8.4167
N = 24				
SD	6.4727	2.4495	105.802	11.6186

Table 26. Listing of Raw Data by Modality (Continued)

Modality	Number of Sessions	Days Between Sessions	Session Length	Session Size
Group II				
DE PDDP	24	7	120	23
FL GTYT	10	7	120	15
FL NIGT	35	7	120	20
GA GTII	21	3	60	15
NC GTRC	50	1	90	15
IN TPGT	10	7	60	25
LA PDGT	40	7	75	10
OK ICC	25	7	120	10
OK CAP	34	5	60	11
OK OKGC	24	7	90	7
IA BMDS	13	5	180	20
MO CAP	27	7	165	8
CO GTIN	16	7	90	36
CO GTCF	22	7	90	18
CO CAPP	12	2	120	40
PR GRPT	12	15	90	7
FL ASGT	16	7	180	15
KS ISII	10	1	120	20
MO INDC	36	15	120	1
OK SPSV	27	7	60	11
TX DLII	12	7	150	18
AZ PRWK	24	7	60	60
Mean	22.73	6.591	106.364	18.4091
N = 22				
σ	9.574	3.339	37.2689	12.598

Table 26. Listing of Raw Data by Modality (Continued)

Modality	Number of Sessions	Days Between Sessions	Session Length	Session Size
Group III				
IN BMOD	10	7	60	80
Group IV				
SD YANK	90	1	60	10
SD RVPK	72	1	60	12
SD FTMD	80	1	60	8
\bar{X}	80.67	1	60	10
Group V				
SC INPT	28	1	1440	1
LA INPT	28	1	1440	1
NE INPT	30	1	1440	1
\bar{X}	28.67	1	1440	1
Group VI				
ID DCPI	3	30	30	1
ID DCPII	6	30	30	1
ID DCPIII	9	30	30	1
ID DCPIV	12	30	30	1
\bar{X}	7.5	30	30	1

Group V is defined by three inpatient treatment programs offered at the South Carolina, Louisiana, and Nebraska ASAPs. Treatment is a continuous, individualized intensive residential program.

Group VI includes four versions of the Idaho Driver Improvement Counseling Program. These four versions are identical except for the number of monthly sessions which is, in effect, determined by the length of the probation period.

Analysis of Relative Treatment Effectiveness

"Table 15" data were available for a small subset (Table 27) of the original 57 non-school modalities. The cumulative survival rates for a composite of problem/non-problem drinkers were computed from recidivism data for those modalities listed in Table 27. The results of these computations are presented in Table 28 and Figure 28. Unidentified drinkers were excluded for lack of sufficient data. Similarly, Groups III and V were also excluded. Groups IV and VI were not analyzed since the single project structure of these clusters limits the interpretability of the results. Comparisons of Groups I and II cumulative survival rates at each interval were affected by t tests as reported in Table 28. The groups exhibit statistically significant differences at five intervals. The absolute magnitude of between group differences in survival rate are not large, however. Nonetheless, gross indications of differences can be examined on the basis of these statistical results. For example, a significant t value was found for the comparisons of the cumulative proportion of survivors at the first interval. The absolute difference at this interval is of the magnitude of 2%. The greatest difference is found at the eighth interval (approximately 10%). However, several factors caution against inferences based on these facts alone. First, the eighth interval represents two quarters of data and yet the effective sample size for Group I is substantially smaller than at any other interval. Second, the data for quarters ten through twelve suffer the problems of prolonged follow-up and reduction of total persons exposed to risk. Thus, differences such as the one shown for interval eight must be viewed as clues for use in further evaluation of relationships rather than interpreted as final expressions of the true relationship between these treatment types.

Differences in relative effectiveness of the grouped modalities was assessed by means of multivariate profile analysis. A summary of the results of the profile analyses for the composite drinker types entering Group I and Group II

TABLE 27. LISTING OF SUBSET OF TREATMENT MODALITIES EMPLOYED IN THE ASSESSMENT OF RELATIVE TREATMENT EFFECTIVENESS.

Grouped Modalities

Group I

VT ATAC Vermont - NIAAA Alcohol Counseling
TX ATP Texas - NIAAA Alcohol Treatment Program
SC INDT South Carolina - Individual Therapy
SC GRPT South Carolina - Group Therapy
OM BMOD Ohio - Group Education for Behavior Modification

Group II

OK OKGC (Oklahoma - Oklahoma City Community Center:
Group Counseling
OK SPSV Oklahoma - Special Services
MO CAP Missouri - Community Alcohol Program
IA BMDS Iowa - Behavior Modification School
TX DLII Texas - Diagnosis and Level II Rehabilitation
(Group Therapy)
AZ PRWK (Arizona - Prevention Workshop (Group Therapy)

TABLE 28. CUMULATIVE SURVIVAL RATE TABLE FOR GROUP I AND GROUP II TREATMENT MODALITIES, PD/PD COMPOSITE.

		Interval							
		1	2	3	4	5	6	7	8
<u>Cumulative Survival Rate</u>									
	Group I	.98756	.95989	.94314	.93406	.91163	.88645	.85831	.82179
	Group II	.96467	.93827	.91526	.89450	.87127	.84902	.82835	.71962
<u>Standard Errors</u>									
107	Group I	.0037284	.0069692	.0084818	.0093211	.0117188	.0152506	.0217634	.0413693
	Group II	.0022731	.0030575	.0036695	.0042011	.0048370	.0056043	.0068240	.0174762
<u>Effective Sample Size</u>									
	Group I	884	561	238	109	171	115	65	24
	Group II	6595	2847	1776	1256	1081	792	510	373
t		5.242*	2.841 ⁺	3.0168 ⁺	3.869*	3.1835*	2.304	1.314	2.275
df		7477	3406	2012	1363	1250	905	573	395

* p < .001
⁺ p < .005

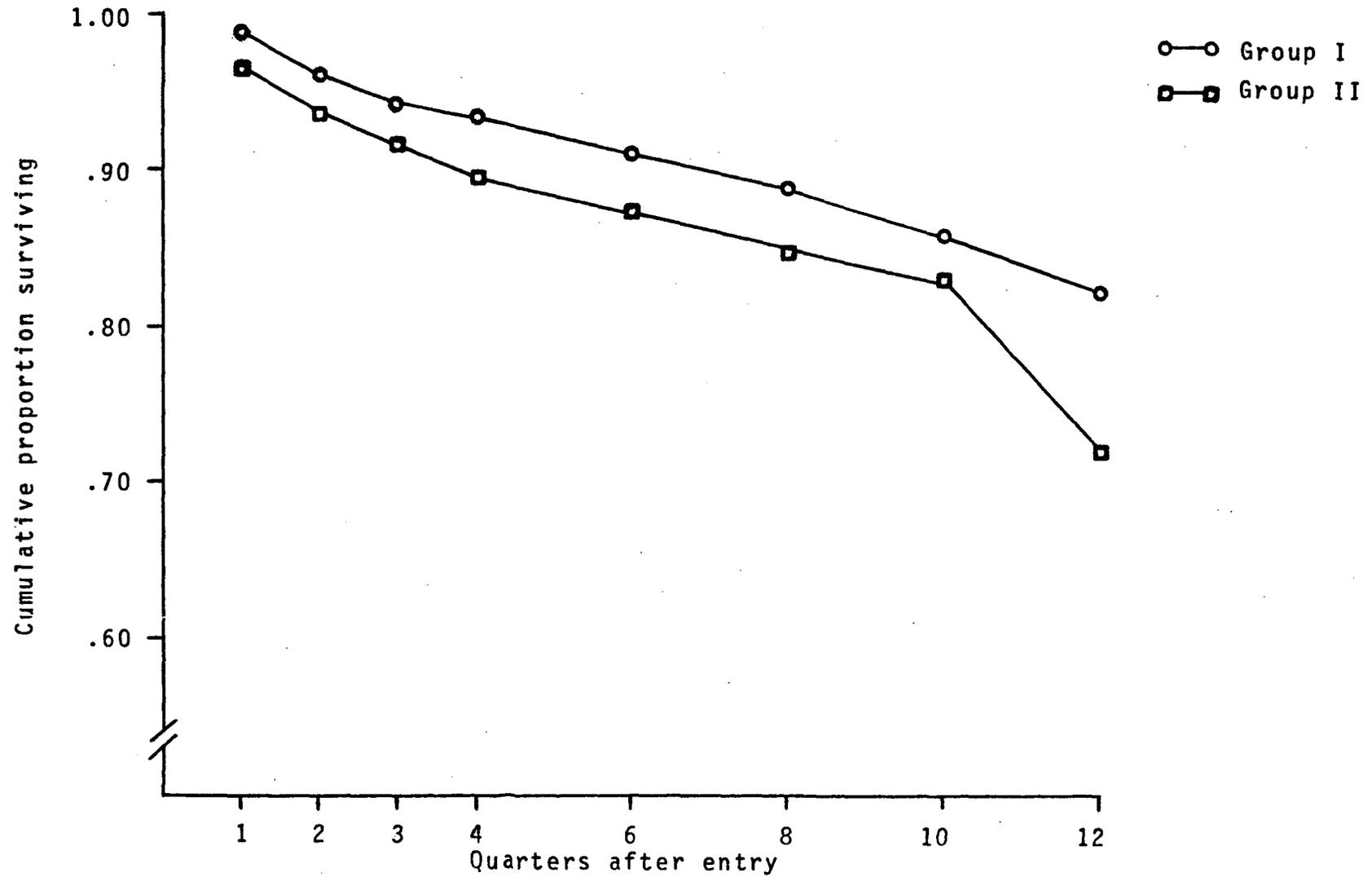


FIGURE 28. CUMULATIVE SURVIVAL RATE CURVES FOR PROBLEM/NON-PROBLEM COMPOSITE OF PERSONS TREATED BY GROUP I AND GROUP II TREATMENT MODALITIES.

treatment modalities are presented in Table 29. The non-significant multivariate test of parallelness ($p = .953$) indicates the mean vectors, disregarding drinker type, for the two treatment groups are not significantly non-parallel over the six time intervals. Inspection of the univariate analyses for each segment of the vectors supports this conclusion. In subsequent tables these univariate tests are presented only when the results are significant. The multivariate test of zero slope of the grand mean vector yields significance ($F = 4.394$, $df = 5$ and 15 , $p = .012$). The univariate test for between group differences was not significant implying that, overall, the profiles were not at different levels. Examination of the plotted profiles (Figure 29) illustrates the similarity of these group mean vectors. These results suggest that differential treatment effectiveness cannot be shown for treatment Groups I and II when individual drinker types are pooled.

The cumulative survival rates for non-school treatment Groups I and II were calculated for both problem and non-problem drinker types. Results of the problem drinker survival rate analyses are found in Table 30 and Figure 30. The t tests of between group differences are significant at each of the six exposure time intervals. Examination of the survival rate curve (Figure 30) supports the conclusion of between group differences. The absolute magnitude of the difference for intervals 5 and 6 approaches 10% and 11% respectively. This indicates that at a gross level, the treatment modality groups are differentially effective.

The summary of the profile analysis for change in mean survival rate for problem drinkers participating in Group I and Group II treatments is found in Table 31 and Figure 31. The non-significant parallelism test ($p = .078$) indicates the shapes of the profiles are not significantly different over the eight quarters of exposure time. The significant test of the flatness of the slope hypothesis indicates the grand mean vector is non-zero. Because the profiles are of similar shape, the significance of the univariate test for between group differences would then indicate whether the two treatment modality groups exhibit differential relative effectiveness. The non-significant test of the levels hypotheses implies no difference in the relative effectiveness of these types of treatment, despite an apparently wide separation between the two treatment types at each follow-up interval.

Although the profile analysis did not detect statistically significant between group differences, the mean group survival rates treated by this analysis are not dissimilar

TABLE 29. CHANGE IN CUMULATIVE SURVIVAL RATES
OVER EIGHT QUARTERS OF EXPOSURE TIME FOR TWO
NON-SCHOOL MODALITY TYPES, PD/PD COMPOSITE

A. Results of Profile Analysis

1. Test of Parallel Profiles:

Multivariate F = 0.207 df = 5 and 16
p = .953

	MS			
<u>Univariate</u>	<u>Parallelism</u>	<u>MS Error</u>	<u>Univariate F</u>	<u>p</u>
Qtr 1-2	.000056103	.0019374	.029	.861
Qtr 2-3	.000000593	.0016392	.000	.983
Qtr 3-4	.00138087	.001353	1.021	.326
Qtr 4-5	.000994913	.0025811	.385	.548
Qtr 5-6	.000023502	.00073125	.032	.854

2. Test of Flatness of Grand Mean Vector:

Multivariate F = 4.394 df = 5 and 16
p = .012

3. Test of Between Group Differences:

Univariate F = 0.232 df = 1 and 20
p = .640

B. Group Means Computed from Individual Modality
Survival Rates

	Interval					
	1	2	3	4	5	6
Group I	.9905	.9632	.9351	.9076	.8654	.8549
Group II	.9535	.9182	.8915	.9745	.8575	.8442

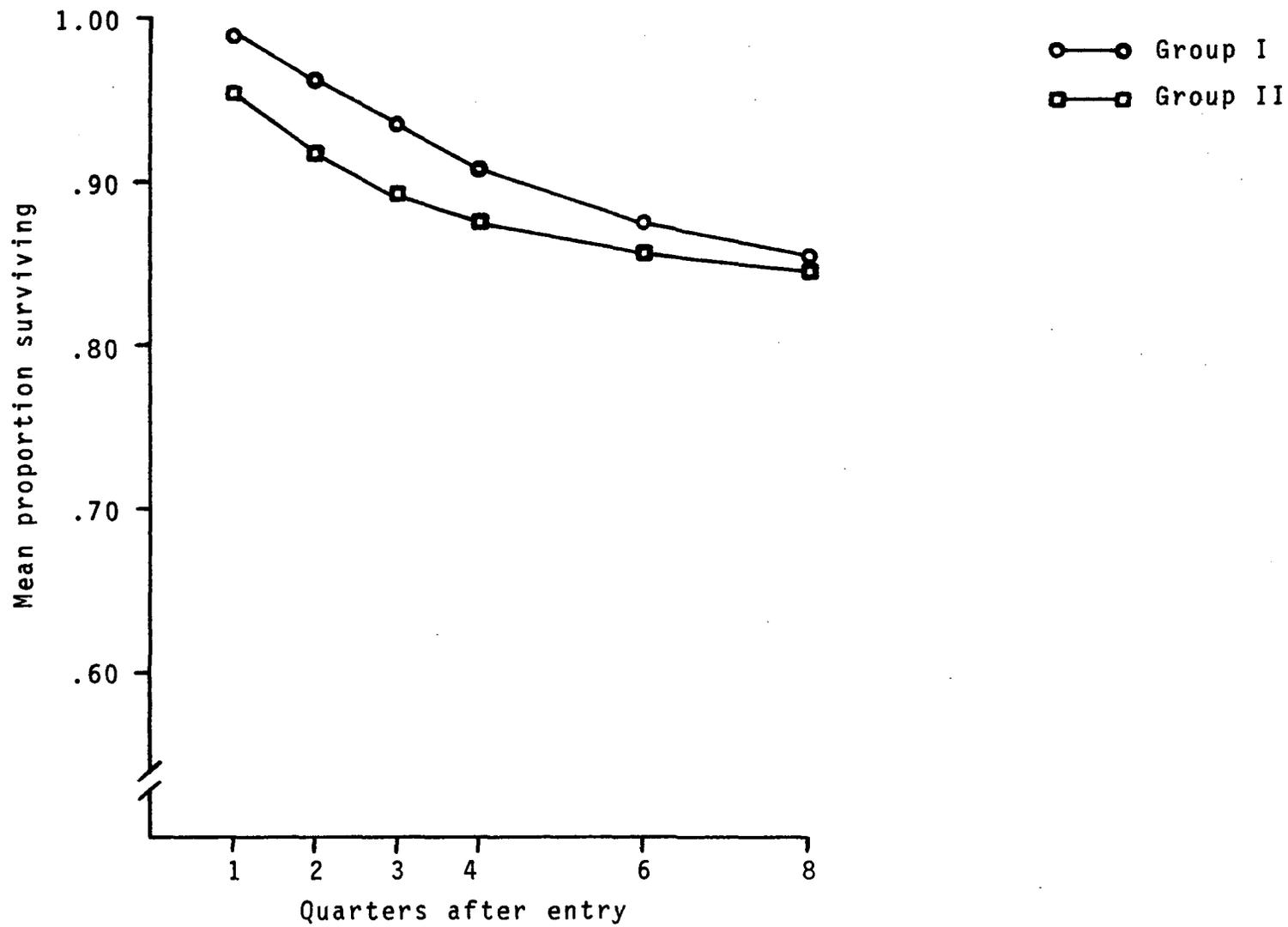


FIGURE 29. MEAN SURVIVAL PROFILES FOR GROUP I AND GROUP II
TREATMENT MODALITIES PD/PD COMPOSITE

TABLE 30. CUMULATIVE SURVIVAL RATE TABLE FOR GROUP I AND GROUP II TREATMENT MODALITIES, PROBLEM DRINKERS.

		Interval							
		1	2	3	4	5	6	7	8
<u>Cumulative Survival Rate</u>									
Group I		.98729	.95708	.94561	.94582	.91664	.88914	.85908	.82090
Group II		.95269	.91789	.88376	.85431	.80953	.77894	.76010	.76010
<u>Standard Errors</u>									
Group I		.0039951	.0075686	.008203	.0095774	.0118107	.0159217	.0229692	.0432986
Group II		.0045502	.0060522	.0073475	.0085504	.0107845	.0132054	.0167799	.0167799
<u>Effective Sample Size</u>									
Group I		786	518	158	111	143	114	61	22
Group II		2177	960	663	440	427	208	83	0
t		5.714*	4.044*	5.616*	6.3487*	6.697*	5.327*	3.478*	1.309
df		2961	1476	819	549	568	320	142	20

112

* p < .001

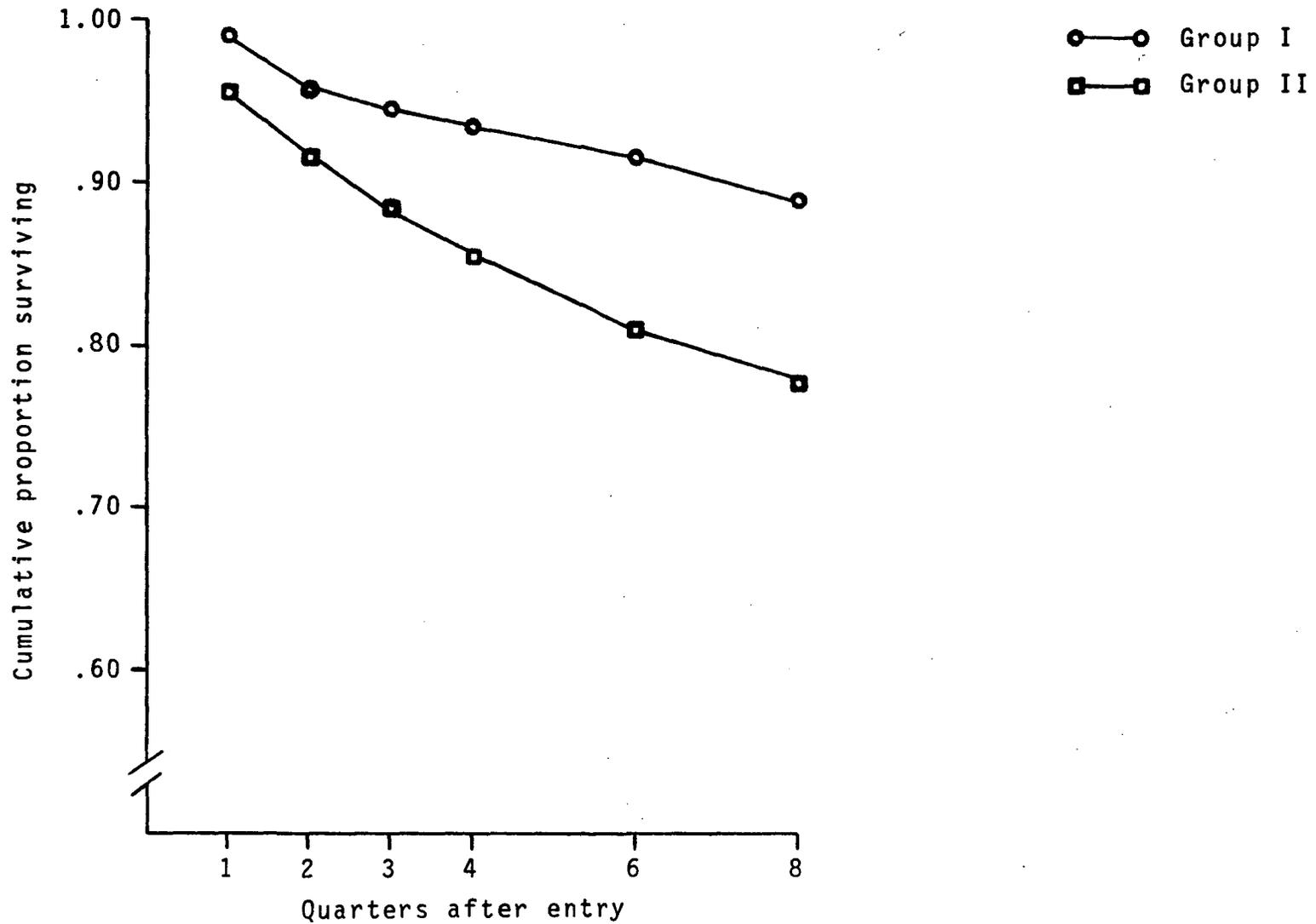


FIGURE 30. CUMULATIVE SURVIVAL RATE FOR NON-SCHOOL TREATMENT TYPES I AND II; PROBLEM DRINKERS

TABLE 31. CHANGE IN CUMULATIVE SURVIVAL RATES
OVER EIGHT QUARTERS OF EXPOSURE TIME FOR TWO
NON-SCHOOL MODALITY TYPES, PROBLEM DRINKERS

A. Results of Profile Analysis

1. Test of Parallel Profiles:

Multivariate $F = 3.99$ $df = 5$ and 5
 $p = .078$

2. Test of Flatness of Grand Mean Vector:

Multivariate $F = 12.756$ $df = 5$ and 5
 $p = .009$

3. Test of Between Group Differences:

Univariate $F = 1.466$ $df = 1$ and 9
 $p = .256$

B. Group Means Computed from Individual Modality
Survival Rates

	Interval					
	1	2	3	4	5	6
Group I	.9878	.9382	.9222	.91	.8856	.8672
Group II	.924	.872	.824	.798	.767	.746

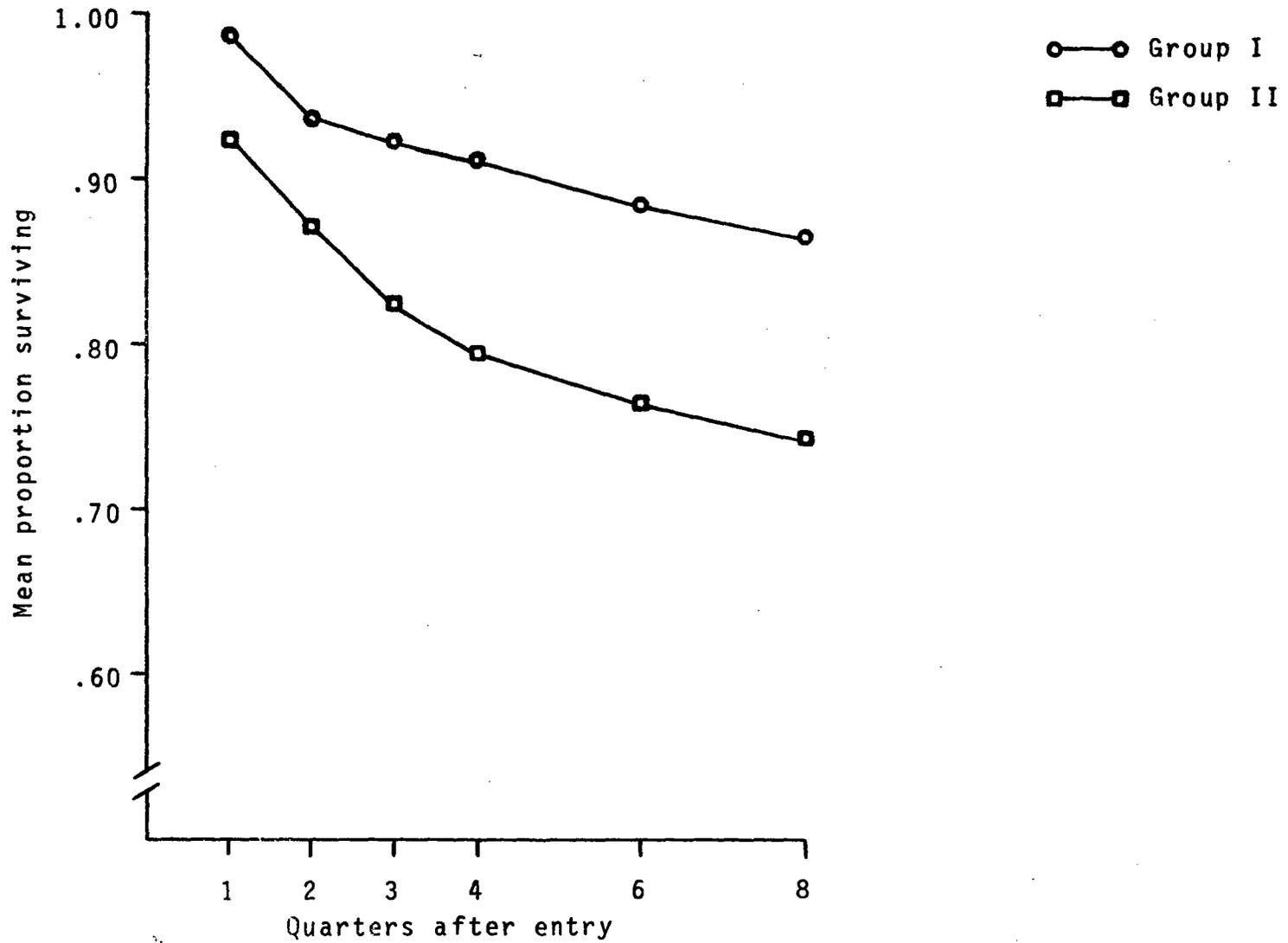


FIGURE 31. MEAN SURVIVAL RATE OF PROBLEM DRINKERS PARTICIPATING IN GROUP I AND GROUP II NON-SCHOOL REHABILITATION MODALITIES.

from the pooled survival rate curves shown in Figure 30. There would appear to be a reasonable basis at least for the suggestion of differential effectiveness between Group I and Group II non-school treatments.

Non-problem drinker cumulative survival rates are presented in Table 32 and Figure 32. It is apparent from the data and the plotted curves that the cumulative survival rate of non-problem drinkers attending Group I modalities differs very little from the survival rate of Group II non-problem drinkers. The fact that no significant difference was found by the t tests further supports this conclusion.

The profile analysis of change in survival rate over time for non-problem drinkers attending Group I and Group II modalities is summarized in Table 33. Mean group vectors are plotted in Figure 33. Non-significant results for the three tests of hypotheses indicate that treatment type has no effect upon the survival rate of non-problem drinkers.

The nature of the data, particularly the effective sample sizes shown in Table 32 illustrates an interesting dichotomy in the referral of persons to the two modality types. Examination of these data by individual drinker type would suggest that Group II modalities treat more non-problem drinkers than do Group I modalities.

TABLE 32. CUMULATIVE SURVIVAL RATE TABLE FOR GROUP I AND GROUP II TREATMENT MODALITIES, NON-PROBLEM DRINKERS.

		Interval							
		1	2	3	4	5	6	7	8
<u>Cumulative Survival Rate</u>									
	Group I	.99065	.97971	.94274	.91362	.89063	.89063	.89063	.89063
	Group II	.97075	.94879	.93163	.91445	.89813	.87751	.85613	.73266
<u>Standard Errors</u>									
117	Group I	.009302	.014252	.0250298	.0316110	.03827	.03827	.03827	.03827
	Group II	.0025372	.0034297	.0040627	.0046457	.0050276	.0060452	.0074199	.0195860
<u>Effective Sample Size</u>									
	Group I	107	54	58	30	17	4	0	0
	Group II	4411	1880	1076	839	646	614	432	322
t		2.064	2.109	.438	-.260	-.194	.339	.885	3.675
df		4516	1932	1132	867	661	616	430	320

118

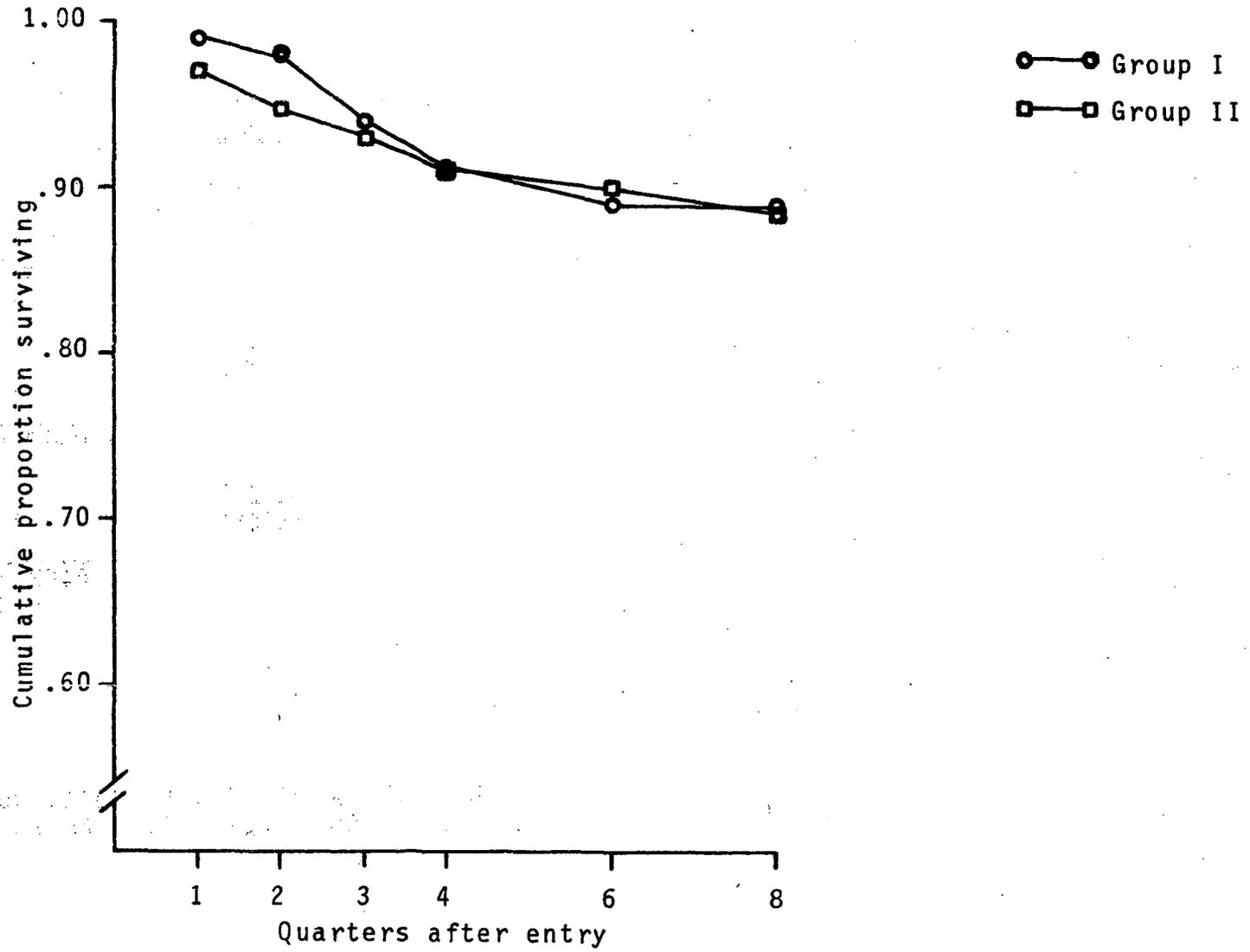


FIGURE 32. CUMULATIVE SURVIVAL RATE CURVES FOR NON-SCHOOL TREATMENT TYPES I AND II: NON-PROBLEM DRINKERS

TABLE 33. CHANGE IN CUMULATIVE SURVIVAL RATES OVER EIGHT QUARTERS OF EXPOSURE TIME FOR TWO NON-SCHOOL MODALITY TYPES, NON-PROBLEM DRINKERS

A. Results of Profile Analysis

1. Test of Parallel Profiles:

Multivariate F = .952 df = 5 and 5
p = .521

2. Test of Flatness of Grand Mean Vector:

Multivariate F = .746 df = 5 and 5
p = .623

3. Test of Between Group Differences:

Univariate F = .822 df = 1 and 9
p = .608

B. Group Means Computed from Individual Modality Survival Rates

	Interval					
	1	2	3	4	5	6
Group I	.9918	.9874	.948	.9052	.844	.8422
Group II	.983	.966	.961	.952	.948	.943

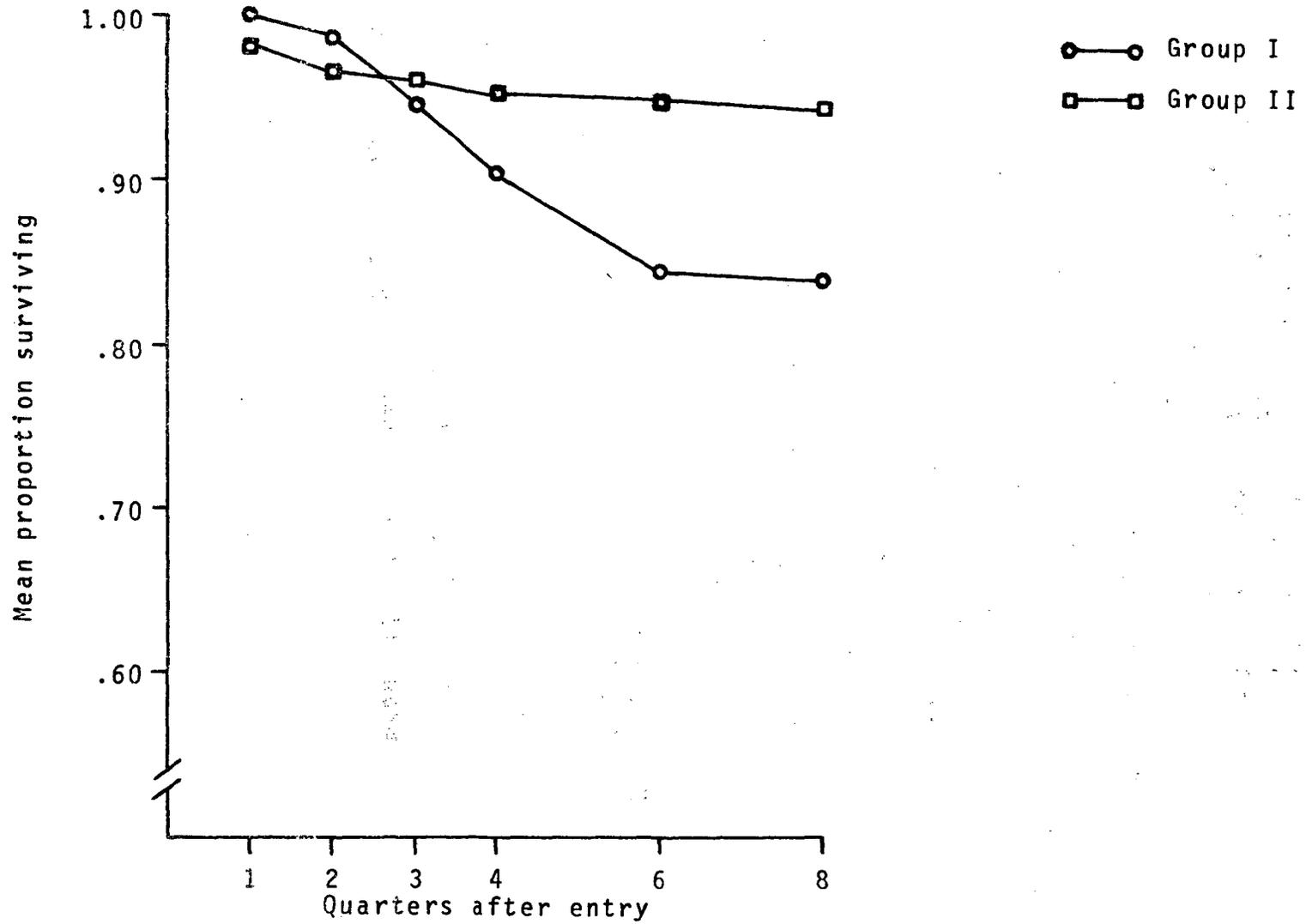


FIGURE 33. MEAN SURVIVAL RATE OF NON-PROBLEM DRINKERS PARTICIPATING IN GROUP I AND GROUP II NON-SCHOOL TREATMENT MODALITIES.

FACTORS INFLUENCING EFFECTIVENESS

In addition to efforts to empirically assess the effectiveness of ASAP rehabilitation systems and individual modalities, an important aspect of a comprehensive project or program evaluation is the systematic identification of factors which are related to, or which influence treatment effectiveness. This objective is pursued in the present section by consideration of two sets of client profile comparisons. The first set of comparisons examines the equivalence of program "successes" and "failures" relative to a number of demographic variables and client characteristics. Successes and failures are, for purposes of this analysis, considered to be non-recidivists and recidivists respectively. The second set of comparisons attempted in the present section contrasts clients who completed assigned ASAP treatment programs with those who either failed to appear for their assigned treatment program or who dropped out of treatment prematurely. The focus of this analysis is directed toward the identification of factors which influence the retention of clients in treatment.

Although analytic study guidelines included the recommendation that project level evaluations include attention to these profile comparisons, few of the studies submitted during the 1972-1974 period of ASAP operations included such analyses. As a consequence, it is not possible to compile a meaningful summary of project initiated profile descriptions or comparisons. As an alternative, the present profile comparisons are based on client file data obtained from several of the ASAPs. In order to perform the required comparisons between recidivists and non-recidivists, and between treatment completion and dropout/no-show groups, these data files were merged to form a composite data file which included cases from a total of seven sites. A detailed description of the characteristics of these ASAP client file data is contained in Volume II of the present report.

RECIDIVIST VS. NON-RECIDIVIST PROFILES

Rearrest information sufficient to identify individual clients as either recidivists or non-recidivists was included in the client file data obtained from seven of the ASAPs. *

*See next page.

Table 34 contains the distributions of recidivists and non-recidivists by client sex, and shows the preponderance of both groups to be male. Table 35 compares the marital status distributions of the two groups of ASAP clients based on data from six of the projects. Although a slightly greater proportion of the recidivist group was divorced or separated (25.78% vs. 21.03% for the non-recidivist group) this difference (4.75%) does not appear to be of sufficient magnitude to be of practical importance.

Table 36 contrasts the recidivist and non-recidivist groups with respect to the client's racial or ethnic classification. Whites are represented equally in both recidivist and non-recidivist groups, while blacks would appear to be under-represented within the recidivist group. The "other" racial category is substantially over-represented among recidivists compared to non-recidivists. Although it is not possible to discriminate the precise composition of this category in the combined analysis presented in Table 36, it might be noted that American Indians constitute the majority of this category for the Oklahoma City and South Dakota projects (both contributing data to this table), while Mexican Americans are substantially represented in this category for the San Antonio project (also included in this composite analysis).

The age distributions of the recidivist and non-recidivist groups are presented in Table 37. Inspection of this table shows the two groups to be strikingly similar with respect to this demographic variable.

No major differences between recidivists and non-recidivists are seen with respect to educational level (Table 38) although recidivists would appear to be under-represented relative to non-recidivists in the "eighth grade or less" category, and slightly over-represented for the "high school" level. With the exception of the "professional/managerial" category, the two groups also appear to be similarly distributed among occupational classifications (Table 39).

* Fairfax Co., Virginia
Hennepin Co., Minnesota
New Hampshire
Oklahoma City, Oklahoma
San Antonio, Texas
South Dakota
Wichita, Kansas

TABLE 34. RECIDIVIST VS. NON-RECIDIVIST
 PROFILES: SEX (Data from seven sites).

	<u>Recidivists</u>	<u>Non-Recidivist</u>
Male	6818 93.01	36330 91.43
Female	513 7.00	3407 8.58
Total	7331	39737

Cell entries include: frequency
 column percent

TABLE 35. RECIDIVIST VS. NON-RECIDIVIST
 PROFILES: MARITAL STATUS (Data from six
 sites).

	<u>Recidivists</u>	<u>Non-Recidivist</u>
Single or Widowed	1536 28.49	6624 31.47
Married	2466 45.74	10004 47.52
Divorced or Separated	1390 25.78	4426 21.03
Total	5392	21054

Cell entries include: frequency
 column percent

TABLE 36. RECIDIVIST VS. NON-RECIDIVIST
 PROFILES: RACE (Data from five sites).

	<u>Recidivist</u>	<u>Non-Recidivist</u>
White	5148 79.25	24636 79.76
Black	536 8.26	4141 13.41
Other	812 12.50	2112 6.84
Total	6496	30889

Cell entries include: frequency
 column percent

TABLE 37. RECIDIVIST VS. NON-RECIDIVIST
 PROFILES: AGE (Data from seven sites).

	<u>Recidivist</u>	<u>Non-Recidivist</u>
15-17	64 0.89 0.89	414 1.10 1.10
18-19	367 5.09 5.98	2175 5.74 6.84
20-24	1141 15.83 21.81	6588 17.36 24.20
25-34	1993 27.64 49.45	10457 27.55 51.75
35-44	1667 23.12 72.57	8010 21.11 72.86
45-54	1312 18.20 90.77	6287 16.57 89.43
55-64	491 6.81 97.58	2654 7.00 96.43
65 or Older	177 2.46 100.00	1372 3.62 100.00
Total	7212	37957

Cell entries include: frequency
 column percent
 cumulative column percent

TABLE 38. RECIDIVIST VS. NON-RECIDIVIST
 PROFILES: EDUCATIONAL LEVEL (Data from
 seven sites).

	<u>Recidivist</u>	<u>Non-Recidivist</u>
8th grade or less	1668 26.97 26.97	10997 34.84 34.84
High school	3469 56.08 83.05	14381 45.56 80.40
Some college/ trade school	830 13.42 96.47	4197 13.30 93.70
College degree	158 2.56 99.03	1395 4.42 98.12
Post college	61 0.99 100.00	599 1.90 100.00
Total	6186	31569

Cell entries include: frequency
 column percent
 cumulative column percent

TABLE 39. RECIDIVIST VS. NON-RECIDIVIST
 PROFILES: OCCUPATIONAL CLASSIFICATION
 (Data from six sites).

	<u>Recidivist</u>	<u>Non-Recidivist</u>
Professional/ managerial	455 8.54	3776 18.24
White collar/ clerical	780 14.64	2372 11.46
Blue collar- skilled	1815 34.05	6903 33.34
Blue collar- unskilled	1273 23.88	4225 20.41
Voluntarily unemployed	456 8.56	1739 8.40
Involuntarily unemployed	552 10.36	1690 8.17
Total	5331	20705

Cell entries include: frequency
 column percent

Substantially fewer recidivists than non-recidivists are classified as professionals or managers, however.

Considerable differences are apparent in the profiles of the two groups with respect to annual income. Inspection of Table 40 would suggest that the earnings of recidivists tend to be substantially lower than non-recidivists.

Table 41 compares recidivists with non-recidivists with respect to project drinker classification. In general, it would appear that while both recidivist and non-recidivist distributions contain approximately equal proportions of mid-range problem drinkers, a substantially greater proportion of the recidivist group had been diagnosed as problem drinkers. Table 42 summarizes the gross recidivism rates for each drinker classification at the six projects contributing data to Table 41. With the exception of the San Antonio clients, the probability of recidivism would appear to increase as a function of the diagnosed severity of the client's drinking problem. The reverse was true of the San Antonio project in which the social drinker category exhibited a recidivism rate nearly twice as large (14.8%) as that of the problem drinker category (7.8%). On the whole, however, these data would suggest that drinking problem severity (as determined by the site's drinker diagnosis) exerts a substantial and important influence on the probability of recidivism.

Table 43 shows the arrest BAC distributions for recidivists and non-recidivists. Examination of the cumulative column percentages at successive BAC levels would suggest that the recidivist group tended to exhibit higher average BACs at the time of the index arrest than did the non-recidivist group. This finding is compatible with the finding of a greater proportion of problem drinkers among this group of ASAP clients.

A final set of characteristics of recidivists vs. non-recidivists which is considered a potential factor in distinguishing the two groups is the record of prior arrests and convictions. Distributions of prior alcohol related traffic arrests, other traffic arrests, and arrests for non-traffic offenses are presented in Table 44. Inspection of this table shows the recidivist group to exhibit a much larger proportion of prior contacts with law enforcement agencies than the non-recidivist group. This finding, particularly with respect to prior alcohol related traffic arrests, is also consistent with the fact that recidivists tend more frequently to be diagnosed

TABLE 40. RECIDIVIST VS. NON-RECIDIVIST
 PROFILES: ANNUAL INCOME (Data from
 seven sites).

	<u>Recidivist</u>	<u>Non-Recidivist</u>
	471	1755
\$2000 or less	10.04	9.37
	10.04	9.37
	1595	5308
\$2001 - \$6000	33.98	28.32
	44.02	37.69
	1632	5598
\$6001 - \$10,000	34.77	29.87
	78.79	67.56
	640	3438
\$10,001 -	13.64	18.34
\$15,000	92.43	85.90
	357	2648
Over \$15,000	7.61	14.13
	100.00	100.00
Total	4695	18747

Cell entries include: frequency
 column percent
 cumulative column percent

TABLE 41. RECIDIVIST VS. NON-RECIDIVIST
 PROFILES: DRINKER CLASSIFICATION (Data
 from six sites)

	<u>Recidivist</u>	<u>Non-Recidivist</u>
Social Drinker	761 21.93	7347 30.56
Midrange Problem Drinker	891 25.67	5868 24.41
Problem Drinker	1819 52.41	10831 45.05
Total	3471	24046

Cell entries include: frequency
 column percent

TABLE 42. RECIDIVIST VS. NON-RECIDIVIST
 PROFILES: PERCENT RECIDIVISTS FOR THREE
 DRINKER CLASSIFICATIONS AT SIX SITES.

Site	Social Drinker	Midrange Problem Drinker	Problem Drinker	Total	Total Clients Observed
Fairfax	3.6%	5.5%	11.8%	7.8%	8664
Oklahoma City	9.2%	11.2%	15.8%	13.8%	2825
San Antonio	14.8%	N/A	7.8%	11.9%	2644
South Dakota	14.1%	18.6%	22.4%	18.9%	8859
Wichita	8.9%	N/A	18.6%	15.3%	1466
New Hampshire	5.9%	N/A	6.6%	6.3%	3059
Total	9.4%	13.2%	14.4%	12.6%	27517

TABLE 43. RECIDIVIST VS. NON-RECIDIVIST
 PROFILES: INDEX ARREST BAC (Data from
 six sites).

	<u>Recidivist</u>	<u>Non-Recidivist</u>
	6	54
.01 - .04	0.16	0.29
	0.16	0.29
	77	869
.05 - .09	2.03	4.56
	2.19	4.85
	584	4140
.10 - .14	15.36	21.71
	17.55	26.56
	1290	6349
.15 - .19	33.93	33.29
	51.48	59.85
	1067	4849
.20 - .24	28.06	25.43
	79.54	85.28
	534	2015
.25 - .29	14.05	10.57
	93.59	95.85
	185	603
.30 - .34	4.87	3.17
	98.46	99.02
	46	154
.35 - .39	1.21	0.81
	99.67	99.83
	9	30
.40 - .44	0.24	0.16
	99.91	99.99
	5	9
.45 - .49	0.14	0.05
	100.00	100.00
Total	3803	19072

Cell entries include: frequency
 column percent
 cumulative column percent

TABLE 44. RECIDIVIST VS. NON-RECIDIVIST PROFILES: PRIOR ARREST HISTORY

Prior Arrests	A/R Traffic		Other Traffic		Non-Traffic	
	Recid.	Non-Recid.	Recid.	Non-Recid.	Recid.	Non-Recid.
0	3071 (54.8)	17595 (78.7)	3206 (57.2)	16601 (74.5)	1560 (72.6)	8360 ^a (79.7)
1	1211 (21.6)	2608 (11.7)	957 (17.1)	2043 (9.2)	324 (15.1)	1154 (11.0)
2	534 (9.5)	908 (4.1)	443 (7.9)	1204 (5.4)	99 (4.6)	426 (4.1)
3	214 (3.8)	495 (2.2)	264 (4.7)	806 (3.6)	48 (2.2)	193 (1.8)
4 or more	576 (10.3)	759 (3.4)	737 (13.1)	1632 (7.3)	119 (5.5)	362 (3.4)
Total Cases	5606	22365	5607	22286	2150	10495
No. Sites Contributing Cases	6		5		3	

as problem drinkers. The high rate of prior arrests for other traffic offenses (42.8% of the recidivist group had one or more prior arrests compared to 25.5% for the non-recidivist group) would suggest that DWI recidivists also tend to be problem drivers.

TREATMENT COMPLETIONS VS. NON-COMPLETIONS

Information sufficient to identify the treatment termination status (complete, no-show, or dropout) was recorded in the client file data for only the New Hampshire, San Antonio, and South Dakota data sets. Although the composite file resulting from the merger of data from these sites includes a very large number of cases, the limited number of sites must be considered in the interpretation of the treatment completion status profile comparisons which are presented in the present section.

Table 45 shows the distributions of treatment completions, dropouts, and no-shows by client sex. The data recorded in this table represent a single modality at the New Hampshire ASAP, two modalities from San Antonio's client file, and four treatment modalities within the South Dakota rehabilitation system. The vast majority of each group consists of males, and no important differences can be detected between the termination status groups.

Table 46 shows the cross tabulation of termination status by client marital status based on data from New Hampshire and South Dakota client file data. Although the divorced/separated marital status category appears over-represented among the dropout and no-show groups, relative to the treatment completion group these differences are not so large as to be particularly alarming.

Table 47 shows the racial group distributions for treatment termination groups based on data only from the South Dakota client file. The other category in this comparison is substantially over-represented within the dropout and no-show groups with nearly 25% of this category failing to complete a rehabilitation assignment. This category is composed exclusively of American Indian clients in the South Dakota projects.

The age distributions of the three treatment termination groups are presented in Table 48. Little difference in the composition of the three groups as a function of client age is observed in this tabulation. From 79% to 90% of each age category is observed to have completed their rehabilitation assignment.

TABLE 45. TREATMENT COMPLETION VS. DROPOUT AND NO SHOW PROFILES: SEX (Data from New Hampshire San Antonio and South Dakota).

Sex	Treatment Termination Status		
	Complete	Dropout	No Show
Male	9107 82.34 92.73	993 8.98 93.86	961 8.69 92.86
Female	714 83.71 7.28	65 7.63 6.15	74 8.68 7.15
Total	9821	1058	1035

Cell entries include: frequency
row percent
column percent

TABLE 46. TREATMENT COMPLETION VS. DROPOUT AND NO SHOW PROFILES: MARITAL STATUS (Data from New Hampshire and South Dakota).

Marital Status	Treatment Termination Status		
	Complete	Dropout	No Show
Single or Widowed	2402 89.30 39.14	140 5.21 38.89	148 5.51 41.00
Married	2588 90.97 42.17	141 4.96 39.17	116 4.08 32.14
Divorced or Separated	1148 86.71 18.71	79 5.97 21.95	97 7.33 26.87
Total	6138	360	361

Cell entries include: frequency
row percent
column percent

TABLE 47. TREATMENT COMPLETION VS. DROPOUT AND NO SHOW PROFILES: RACE (Data from South Dakota only).

Race	Treatment Termination Status		
	Complete	Dropout	No Show
White	4520 91.28 87.65	214 4.33 68.59	218 4.41 66.67
Black	17 85.00 0.33	2 10.00 0.65	1 5.00 0.31
Other	620 75.25 12.03	96 11.66 30.77	108 13.11 33.03
Total	5157	312	327

Cell entries include: frequency
row percent
column percent

TABLE 48. TREATMENT COMPLETION VS. DROPOUT AND NO SHOW PROFILES: AGE (Data from New Hampshire San Antonio and South Dakota).

Age	Treatment Termination Status		
	Complete	Dropout	No Show
15 - 17	62 79.49 0.80	2 2.57 0.27	14 17.95 1.31
18 - 19	560 80.12 7.17	56 8.02 7.32	83 11.88 7.73
20 - 24	1484 75.30 18.98	218 11.07 28.46	269 13.65 25.05
25 - 34	2031 78.79 25.98	214 8.31 27.94	333 12.92 31.01
35 - 44	1530 81.13 19.57	158 8.38 20.63	198 10.50 18.44
45 - 54	1364 87.22 17.45	87 5.57 11.36	113 7.23 10.53
55 - 64	616 88.89 7.88	25 3.61 3.27	52 7.51 4.85
65 or older	173 90.58 2.22	6 3.15 0.79	12 6.29 1.12
Total	7820	766	1074

Cell entries include: frequency
row percent
column percent

Table 49 summarizes the educational level distributions for the three treatment termination status groups. Inspection of this table suggests that clients with educational attainment of high school or less tend to leave treatment prematurely to a greater extent than do clients with more than high school level educational achievement.

The occupational distributions of the three groups are presented in Table 50. The only major difference between the three groups evident in this table concerns the occupational category "involuntarily unemployed." Substantially fewer individuals so classified completed the assigned treatment than any other occupational classification, and conversely the dropout and no-show groups contain proportionately more individuals within this category than does the treatment completion group.

Although proportionately more individuals within the dropout and no-show groups reported annual incomes of \$2,000 or less, the differences in annual income between the three groups are not particularly large (Table 51).

The data displayed in Table 52 indicates that problem drinkers tend to dropout or fail to appear for treatment more frequently than do either social or mid-range problem drinkers. It should be noted, however, that since problem drinkers are typically assigned to longer duration treatment, and to more extensive rehabilitation referrals, they also have more opportunity to terminate unsuccessfully. Table 53 shows the index arrest BAC distributions for treatment completions, dropouts, and no-shows. Inspection of this table shows both the dropout and the no-show groups to exhibit slightly higher BACs than did the treatment completion group. One-half of the completion group (50.88%) showed BACs less than .20, while only 44.25% of the dropout and 41.67% of the no-show groups recorded arrest BACs this low.

Table 54 shows the distributions of prior alcohol related traffic arrests for the three treatment termination status groups. As can be seen in this table the treatment completion group shows less evidence of prior offenses than either of the other groups. For the completion group more than one-half of the clients (53.10%) show no prior DWI arrests, while a driving record devoid of DWI arrests (except the index arrest) is recorded for only 40.98% of the dropouts and 39.45% of the no-shows. The differences between the completion and non-completion groups with respect to prior offenses, drinker classification, and index arrest BAC would suggest that those

TABLE 49. TREATMENT COMPLETION VS. DROPOUT AND NO SHOW PROFILES: EDUCATIONAL LEVEL (Data from New Hampshire, San Antonio, and South Dakota).

Education	Treatment Termination Status		
	Complete	Dropout	No Show
8th grade or less	1617 84.80 17.73	268 14.06 28.70	22 1.16 6.63
High school	5797 87.65 63.55	558 8.43 59.64	260 3.94 78.32
Some college/ trade school	1332 91.11 14.61	91 6.23 9.75	39 2.67 11.75
College degree	276 92.93 3.03	13 4.38 1.40	8 2.70 2.41
Post college	100 92.60 1.10	5 4.63 0.54	3 2.78 0.91
Total	9122	934	332

Cell entries include: frequency
row percent
column percent

TABLE 50. TREATMENT COMPLETION VS. DROPOUT AND NO SHOW PROFILES: OCCUPATIONAL CATEGORY (Data from New Hampshire and South Dakota).

Occupation	Treatment Termination Status		
	Complete	Dropout	No Show
Professional	531 94.49 8.84	18 3.21 5.16	13 2.32 3.89
White collar-clerical	446 91.96 7.43	20 4.13 5.74	19 3.92 5.68
Blue collar-skilled	2261 91.51 37.63	122 4.94 34.96	88 3.57 26.27
Blue collar-unskilled	1486 87.78 24.73	106 6.27 30.38	101 5.97 30.15
Voluntarily unemployed	725 91.66 12.07	32 4.05 9.17	34 4.30 10.15
Involuntarily unemployed	561 81.07 9.34	51 7.37 14.62	80 11.57 23.89
Total	6010	349	335

Cell entries include: frequency
row percent
column percent

TABLE 51. TREATMENT COMPLETION VS. DROPOUT AND NO SHOW PROFILES: ANNUAL INCOME (Data from New Hampshire, San Antonio, and South Dakota).

Annual Income	Treatment Termination Status		
	Complete	Dropout	No Show
\$2000 or less	1004 83.95 13.90	100 8.37 16.84	92 7.70 27.55
\$2001 - \$6000	2788 88.32 38.58	248 7.86 41.76	121 3.84 36.23
\$6001 - \$10,000	2055 89.28 28.44	172 7.48 28.96	75 3.26 22.46
\$10,001 - \$15,000	997 91.81 13.80	55 5.07 9.26	34 3.14 10.18
More than \$15,000	384 92.54 5.32	19 4.58 3.20	12 2.90 3.60
Total	7228	594	334

Cell entries include: frequency
row percent
column percent

TABLE 52. TREATMENT COMPLETION VS. DROPOUT AND NO SHOW PROFILES: DRINKER CLASSIFICATION (Data from New Hampshire, San Antonio, and South Dakota).

Drinker Classification	Treatment Termination Status		
	Complete	Dropout	No Show
Social Drinker	1769 89.03 22.38	208 10.47 29.22	10 0.51 1.71
Midrange Problem	2244 92.09 28.39	128 5.26 17.98	65 2.67 11.10
Problem Drinker	3892 81.44 49.24	376 7.87 52.81	511 10.70 87.21
Total	7905	712	586

Cell entries include: frequency
row percent
column percent

TABLE 53. TREATMENT COMPLETION VS. DROP-
 OUT AND NO SHOW PROFILES: INDEX ARREST
 BAC (Data from New Hampshire, San
 Antonio, and South Dakota).

BAC	Treatment Termination Status		
	Complete	Dropout	No Show
.01 - .04	3 .05	0 .00	0 .00
.05 - .09	18 .34	1 .19	3 .83
.10 - .14	946 15.78	67 13.03	44 13.05
.15 - .19	2151 50.88	163 44.25	103 41.67
.20 - .24	1825 80.66	182 79.12	99 69.17
.25 - .29	788 93.52	81 94.64	63 86.67
.30 - .34	295 98.33	19 98.27	37 96.94
.35 and over	102 100.00	9 100.00	11 100.00
Total	6128	522	360

Cell entries include: frequency
 cumulative column percent

TABLE 54. TREATMENT COMPLETION VS. DROPOUT AND NO SHOW PROFILES: NUMBER OF PRIOR A/R TRAFFIC OFFENSES (Data from San Antonio and South Dakota).

Prior A/R Traffic Offenses	Treatment Termination Status		
	Complete	Dropout	No Show
None	3315 90.53 53.10	218 5.96 40.38	129 3.53 39.45
One	1640 86.92 26.27	140 7.42 26.32	107 5.68 32.73
Two	599 86.69 9.60	43 6.23 8.09	49 7.10 14.99
Three	285 81.20 4.57	40 11.40 7.52	26 7.41 7.96
Four or more	405 79.10 6.49	91 17.77 17.11	16 3.12 4.89
Total	6244	532	327

Cell entries include: frequency
row percent
column percent

client characteristics which are used by ASAP diagnostic procedures to define drinking problem severity are also indicative of the probability of retaining a client through the course of his prescribed treatment program.

Recidivism as a Function of Termination Status

Table 55 shows the rearrest recidivism status of clients within completion, dropout and no-show groups. It should be remembered in inspecting this table that the data presented are drawn from a limited subset of the ASAP projects (only New Hampshire, San Antonio, and South Dakota clients) and that the recidivism rates shown are gross indications which are not adjusted for the time during which the clients were exposed to the risk of rearrest. The proportion of recidivists within each group is, however, extremely similar (14.7% for completions, 14.9% for dropouts, and 12.9% for no-shows).

The data presented in Figure 34 would also suggest that recidivism is unrelated to satisfactory completion of assigned treatment. This figure shows the average survival rates (at each of six intervals subsequent to treatment entry) for total treatment entries and dropouts or no-shows from treatment programs at five of the ASAPs.* These data were obtained from "Appendix H, Table 15" submitted by each of these projects. Table 56 summarizes the multiple profile analyses applied to these survival rate estimates. Although the proportion of individuals surviving without rearrest decreases steadily across time (statistically significant multivariate F of 20.21 for the flatness hypothesis), the two groups show parallel and nearly identical rates of survival at each interval. It must be noted with respect to the comparison of treatment entry and dropout/no-show recidivism, however, that the "Table 15" format permits the recording of the total number of dropouts or no-shows from all of a site's treatment programs, not for each treatment modality separately. To the extent that particular treatment modalities are differentially effective in reducing recidivism, real differences in the relative performance of treatment completions and non-completions may have been masked in the analyses conducted. Unfortunately, the data to assess this possibility are not available.

* New Hampshire (PD)
Cincinnati, Ohio (PD and NPD)
Wichita, Kansas (PD and NPD)
South Dakota (PD and NPD)
Phoenix (PD and NPD)

TABLE 55. TREATMENT COMPLETION VS. DROPOUT AND NO SHOW PROFILES: RECIDIVIST STATUS (Data from New Hampshire, San Antonio, and South Dakota).

Recidivist Status	Treatment Termination Status		
	Complete	Dropout	No Show
Recidivist	1474 14.73	166 14.93	141 12.94
Non-Recidivist	8536 85.28	946 85.08	949 87.07
Total	10010	1112	1090

Cell entries include: frequency
column percent

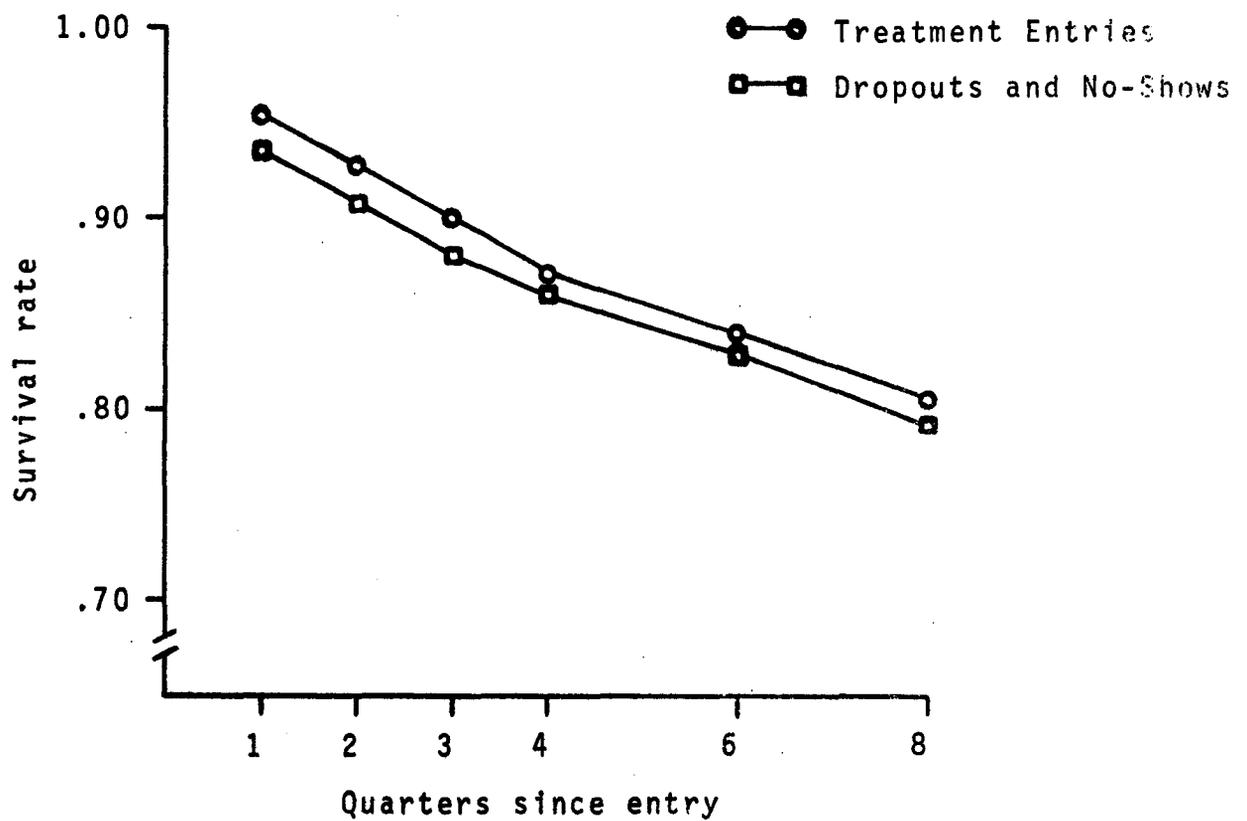


FIGURE 34. COMPARISON OF AVERAGE CUMULATIVE SURVIVAL RATES FOR TOTAL TREATMENT ENTRY AND DROPOUT/NO-SHOW GROUPS FROM FIVE PROJECTS.

TABLE 56. SUMMARY OF PROFILE ANALYSIS BETWEEN
TREATMENT ENTRY AND DROPOUT/NO SHOW GROUPS
(Data from five sites - all drinker types).

<u>Mean Survival Rates</u>	<u>Quarter Since Entry</u>					
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>6</u>	<u>8</u>
Treatment Entry	.957	.927	.898	.872	.839	.806
Drop/No Show	.936	.908	.882	.863	.828	.793
<u>Differences</u>	<u>1-2</u>	<u>2-3</u>	<u>3-4</u>	<u>4-6</u>	<u>6-8</u>	
Treatment Entry	.030	.029	.026	.033	.033	
Drop/No Show	.028	.026	.019	.035	.035	
Univariate F Ratios	.012	.136	1.528	.065	.025	

Multivariate Test of Parallelism Hypothesis:

F = .982 df = 5, 12 p = .532

Levels Hypothesis (Group Differences):

F = .093 df = 1 p = .762

Multivariate Test of Flatness Hypothesis:

F = 20.210 df = 5, 12 p = .000

APPENDIX A

Summaries of Annual Entries, Completions, and
Dropouts from ASAP Treatment Programs
[Summaries are derived from quarterly data tables
(Appendix H, Table 14) submitted by each site.]

TABLE A-1. REHABILITATION MODALITY: ALL PROBLEM DRINKER REHABILITATION PROGRAMS.

ASAP Site	Enrolled at Beginning of 1972	1972			1973			1974			Still Enrolled at End of 1974	Total		
		Enter	Complete	Dropped	Enter	Complete	Dropped	Enter	Complete	Dropped		Enter	Complete	Dropped
Boston, MA	0	50	0	0	525	205	41	767	700	91	305	1,342	905	132
Maine	0	176	19	4	526	267	102	465	433	102	240	1,167	719	208
New Hampshire	0	204	91	19	560	420	123	985	741	192	163	1,749	1,252	334
Vermont	42	326	264	34	492	485	46	1,271	1,196	60	46	2,089	1,945	140
Nassau Co., NY	0	0	0	0	0	0	0	-	-	-	0	0	0	0
Puerto Rico	0	0	0	0	92	0	0	877	67	12	890	969	67	12
Baltimore, MD	50	216	94	10	156	86	10	453	159	44	472	825	339	64
Delaware	0	0	0	0	102	93	5	0	0	0	4	102	93	5
Fairfax Co., VA	0	370	131	5	1,208	457	103	969	652	88	1,061	2,547	1,290	196
Charlotte, NC	15	323	189	49	820	432	73	-	-	-	416	1,143	621	122
Columbus, GA	0	216	152	29	584	502	84	446	365	43	71	1,246	1,019	156
Richland Co., SC	0	175	57	35	281	227	67	268	225	36	77	724	509	138
Tampa, FL	3	155	48	64	747	600	96	1,244	1,119	104	118	2,146	1,767	264
Cincinnati, OH	0	271	174	9	541	365	20	752	623	110	313	1,564	1,112	139
Pennepin Co., MI	0	1,048	50	28	2,179	558	168	4,687	2,357	243	4,510	7,914	2,965	439
Indianapolis, IN	0	278	257	1	660	303	78	1,347	924	0	723	2,286	1,484	79
Washtenaw Co., MI	319	534	220	0	0	0	0	-	-	-	633	534	220	0
Wisconsin	0	591	416	54	0	0	0	-	-	-	121	591	416	54
Albuquerque, NM	3	230	480	28	1,205	1,038	60	-	-	-	432	2,035	1,518	88
New Orleans, LA	0	188	0	0	288	177	11	330	490	10	118	806	667	21
Oklahoma City, OK	0	402	59	32	1,033	453	44	478	835	39	451	1,913	1,347	115
Pulaski Co., AR	0	1,161	248	450	1,286	578	570	1,020	843	309	349	3,447	1,769	1,329
San Antonio, TX	0	240	129	3	533	377	5	439	358	50	299	1,212	855	53
Kansas City, MO	0	1,231	308	88	2,205	651	0	1,754	1,225	499	2,419	5,190	2,184	587
Lincoln, NE	0	394	0	136	576	86	202	823	569	368	432	1,793	655	706
Sioux City, IA	0	31	4	0	147	151	14	261	236	16	13	439	391	30
Wichita, KS	0	203	132	25	559	304	87	508	289	135	289	1,261	725	247
Denver, CO	270	1,080	462	160	2,261	934	410	-	-	-	1,645	3,341	1,396	570
Salt Lake City, UT	0	367	60	0	1,182	890	34	939	457	59	988	2,488	1,407	93
South Dakota	0	985	555	32	1,152	789	58	1,691	1,250	66	1,078	3,828	2,594	156
Los Angeles, CA	0	171	16	9	2,070	670	498	3,384	1,641	1,013	1,778	5,625	2,327	1,520
Phoenix, AR	0	833	530	177	864	726	237	238	193	27	-	1,935	1,449	491
Idaho	1	196	147	15	807	564	10	896	513	4	647	1,899	1,224	29
Portland, OR	151	279	60	60	0	0	0	-	-	-	519	279	60	60
Seattle, WA	108	208	178	37	0	0	0	-	-	-	100	208	179	37
TOTAL	963	13,713	5,522	1,593	25,632	13,488	3,306	27,292	18,460	3,720	21,516	66,637	37,470	8,619

TABLE A-2. REHABILITATION MODALITY: PROBLEM DRINKER ALCOHOL SAFETY SCHOOL.

ASAP Site	Enrolled at Beginning of 1972	1972			1973			1974			Still Enrolled at End of 1974	Total		
		Enter	Complete	Dropped	Enter	Complete	Dropped	Enter	Complete	Dropped		Enter	Complete	Dropped
Boston, MA	0	92	86	3	580	529	51	780	698	82	3	1,452	1,313	136
Maine	0	128	64	40	240	151	15	614	566	38	108	982	781	93
New Hampshire	0	204	91	19	560	420	123	985	741	192	163	1,749	1,252	334
Vermont	11	190	176	15	315	311	18	1,012	885	0	123	1,517	1,372	33
Nassau Co., NY	-	-	-	-	0	0	0	0	0	0	0	0	0	0
Puerto Rico	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Baltimore, MD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delaware	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fairfax Co., VA	0	0	0	0	4	4	0	520	358	83	79	524	362	83
Charlotte, NC	16	175	170	11	476	422	29	-	-	-	35	651	592	40
Columbus, GA	0	159	135	24	393	339	56	298	290	7	-	850	764	87
Richland Co., SC	0	29	23	6	117	110	7	119	110	9	0	265	243	22
Tampa, FL	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cincinnati, OH	0	8	8	0	8	12	4	1	1	0	-	17	21	4
Hennepin Co., MN	0	113	13	3	210	92	17	431	452	3	174	754	557	23
Indianapolis, IN	0	9	0	0	0	0	0	0	0	0	9	9	0	0
Washtenaw Co., MI	100	507	333	0	0	0	0	-	-	-	274	507	333	0
Wisconsin	0	444	301	58	0	0	0	-	-	-	85	444	301	58
Albuquerque, NM	3	830	480	28	1,205	1,038	60	-	-	-	432	2,035	1,518	88
New Orleans, LA	0	182	182	0	287	287	0	330	330	0	0	799	799	0
Oklahoma City, OK	0	53	44	9	194	153	3	125	78	1	84	372	275	13
Pulaski Co., AR	0	279	248	31	430	295	146	292	215	75	-	991	750	252
San Antonio, TX	0	181	119	0	354	307	0	271	226	0	134	786	652	0
Kansas City, MO	0	196	104	31	264	101	0	322	238	47	261	782	443	78
Lincoln, NE	0	143	83	5	372	296	14	123	103	5	133	639	482	24
Sioux City, IA	0	27	0	0	147	150	14	258	233	16	19	432	383	30
Wichita, KS	0	158	132	20	341	280	61	179	148	22	15	678	560	103
Denver, CO	58	149	169	38	23	26	1	-	-	-	-	172	195	39
Salt Lake City, UT	0	320	60	2	538	422	9	607	455	55	463	1,456	937	66
South Dakota	0	631	544	30	727	678	42	1,164	1,099	56	73	2,522	2,321	128
Los Angeles, CA	0	47	15	19	40	343	34	257	109	27	156	703	472	60
Phoenix, AR	0	833	530	177	864	726	287	70	56	15	-	1,767	1,312	479
Idaho	0	162	147	15	574	564	10	517	513	4	0	1,253	1,224	29
Portland, OR	23	276	266	13	0	0	0	-	-	-	20	276	266	13
Seattle, WA	0	0	0	0	0	0	0	-	-	-	0	0	0	0
TOTAL	211	6,505	4,523	597	9,629	8,051	1,001	9,265	7,904	737	2,843	25,399	20,488	2,335

TABLE A-3. REHABILITATION MODALITY: PROBLEM DRINKER CHEMOTHERAPY.

ASAP Site	Enrolled at Beginning of 1972	1972			1973			1974			Still Enrolled at End of 1974	Total		
		Enter	Complete	Dropped	Enter	Complete	Dropped	Enter	Complete	Dropped		Enter	Complete	Dropped
Boston, MA	0	0	0	0	0	0	0	-	-	-	0	0	0	0
Maine	0	32	0	0	8	0	0	10	0	4	46	50	0	4
New Hampshire	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vermont	3	13	9	3	9	10	2	2	3	0	0	24	22	5
Nassau Co., NY	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Puerto Rico	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Baltimore, MD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delaware	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fairfax Co., VA	0	36	8	1	42	42	4	49	22	2	48	127	72	7
Charlotte, NC	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Columbus, GA	0	3	2	0	0	0	0	12	2	2	9	15	4	2
Richland Co., SC	0	2	1	0	1	0	0	1	0	0	3	4	1	0
Tampa, FL	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cincinnati, OH	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hennepin Co., MN	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Indianapolis, IN	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wahstenaw Co., MI	235	342	200	0	0	0	0	0	0	0	377	342	200	0
Wisconsin	0	5	0	1	0	0	0	0	0	0	4	5	0	1
Albuquerque, NM	3	55	36	8	175	109	32	0	0	0	48	230	145	40
New Orleans, LA	0	168	0	6	262	176	12	278	490	10	14	708	666	28
Oklahoma City, OK	0	14	0	11	0	0	0	0	0	0	3	14	0	11
Pulaski Co., AR	0	862	0	419	602	243	393	519	393	221	314	1,983	636	1,033
San Antonio, TX	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Kansas City, MO	0	79	0	13	223	117	38	414	59	127	362	716	176	178
Lincoln, NE	0	248	1	19	348	68	91	220	83	114	440	816	152	224
Sioux City, IA	0	1	0	0	22	10	8	17	13	7	2	40	23	15
Wichita, KS	0	7	2	3	13	1	4	0	1	7	2	20	4	14
Denver, CO	17	159	24	17	388	163	95	0	0	0	265	547	187	112
Salt Lake City, UT	0	1	0	0	5	8	0	0	0	0	0	6	8	0
South Dakota	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Los Angeles, CA	0	33	3	5	1,433	100	247	1,451	376	739	1,157	2,627	479	991
Phoenix, AR	0	6	6	0	0	0	0	0	0	0	0	6	6	0
Idaho	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Portland, OR	75	109	22	21	0	0	0	0	0	0	0	0	0	0
Seattle, WA	0	0	0	0	0	0	0	0	0	0	145	169	22	21
TOTAL	337	2,175	314	527	3,241	1,647	926	2,973	1,442	1,233	3,239	8,389	2,803	2,686

TABLE A-4. REHABILITATION MODALITY: PROBLEM DRINKER GROUP THERAPY.

ASAP Site	Enrolled at Beginning of 1972	1972			1973			1974			Still Enrolled at End of 1974	Total		
		Enter	Complete	Dropped	Enter	Complete	Dropped	Enter	Complete	Dropped		Enter	Complete	Dropped
Boston, MA	0	36	30	3	0	0	0	0	0	0	3	36	30	3
Maine	0	74	10	8	128	176	29	97	71	29	-	299	257	66
New Hampshire	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vermont	0	8	6	1	15	10	4	41	41	3	-	64	57	8
Nassau Co., NY	0	0	0	0	0	0	0	-	-	-	0	0	0	0
Puerto Rico	0	0	0	0	92	0	0	877	67	12	890	969	67	12
Baltimore, MD	50	216	94	10	156	86	10	55	3	0	274	427	183	20
Delaware	0	0	0	0	92	83	5	0	0	0	4	92	83	5
Fairfax Co., VA	0	230	142	4	928	368	72	688	512	21	727	1,846	1,022	97
Charlotte, NC	0	109	19	38	415	100	56	-	-	-	311	524	119	94
Columbus, GA	0	45	10	5	96	66	18	87	36	27	66	228	112	50
Richland Co., SC	0	15	3	5	36	28	1	67	53	12	16	118	84	18
Tampa, FL	1	145	46	59	440	309	89	463	383	73	90	1,048	738	221
Cincinnati, OH	0	171	105	9	180	181	25	319	323	108	-	670	609	142
Hennepin Co., MN	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Indianapolis, IN	0	47	5	0	0	0	0	0	0	0	0	0	0	0
Washtenaw Co., MI	42	11	4	3	0	0	0	-	-	-	42	47	5	0
Wisconsin	0	205	218	29	0	0	0	-	-	-	46	11	4	3
Albuquerque, NM	0	0	0	0	16	8	1	-	-	-	7	16	8	1
New Orleans, LA	0	182	0	0	282	179	9	297	469	4	100	761	648	13
Oklahoma City, OK	0	58	19	8	249	135	13	152	150	11	123	459	304	32
Pulaski Co., AR	0	0	6	0	210	140	31	219	235	13	10	429	375	44
San Antonio, TX	0	0	0	0	17	0	0	4	7	14	0	21	7	14
Kansas City, MO	0	32	18	0	0	0	0	0	0	0	14	32	18	0
Lincoln, NE	0	264	26	23	202	90	59	176	30	60	354	642	146	142
Sioux City, IA	0	0	1	2	0	0	0	4	0	0	1	4	1	2
Wichita, KS	0	38	0	0	110	0	11	72	56	59	94	220	56	70
Denver, CO	97	250	65	34	829	439	131	-	-	-	507	1,079	504	165
Salt Lake City, UT	0	1	0	0	38	20	0	67	19	8	59	106	39	8
South Dakota	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Los Angeles, CA	0	31	3	5	190	134	62	48	12	17	36	269	149	84
Phoenix, AR	0	12	11	1	36	26	7	86	66	6	17	134	103	14
Idaho	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Portland, OR	69	127	29	18	0	0	0	-	-	-	158	127	20	18
Seattle, WA	0	0	0	0	0	0	0	-	-	-	0	0	0	0
TOTAL	259	2,307	855	265	4,757	2,578	533	3,819	2,533	477	3,949	10,883	5,966	1,375

TABLE A-5. REHABILITATION MODALITY: PROBLEM DRINKER INDIVIDUAL PSYCHOTHERAPY.

ASAP Site	Enrolled at Beginning of 1972	1972			1973			1974			Still Enrolled at End of 1974	Total		
		Enter	Complete	Dropped	Enter	Complete	Dropped	Enter	Complete	Dropped		Enter	Complete	Dropped
Boston, MA	0	26	0	0	0	0	0	0	0	0	26	26	0	0
Maine	0	5	4	1	108	90	10	72	72	0	8	185	166	11
New Hampshire	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vermont	1	32	5	1	87	86	9	263	202	44	36	382	293	54
Nassau Co., NY	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Puerto Rico	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Baltimore, MD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delaware	0	0	0	0	1	1	0	0	0	0	0	1	1	0
Fairfax Co., VA	0	33	34	4	72	89	4	110	64	14	6	215	187	22
Charlotte, NC	0	0	0	0	0	0	0	-	-	-	0	0	0	0
Columbus, GA	0	0	0	0	0	1	0	0	0	0	0	0	1	0
Richland Co., SC	0	101	22	18	109	83	56	76	57	15	35	286	162	89
Tampa, FL	1	7	0	5	25	4	5	44	23	16	24	76	27	26
Cincinnati, OH	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hennepin Co., MN	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Indianapolis, IN	0	135	17	1	0	0	0	0	0	0	118	136	17	1
Washtenaw Co., MI	8	0	1	2	0	0	0	-	-	-	5	0	1	2
Wisconsin	0	147	6	3	0	0	0	-	-	-	138	147	6	3
Albuquerque, NM	0	10	3	0	58	23	10	-	-	-	32	68	26	10
New Orleans, LA	0	0	0	0	17	14	0	44	45	0	2	61	59	0
Oklahoma City, OK	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pulaski Co., AR	0	0	0	0	0	0	0	0	0	0	0	0	0	0
San Antonio, TX	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Kansas City, MO	0	345	3	17	242	354	29	0	184	0	0	587	541	46
Lincoln, NE	0	283	5	50	377	40	155	294	69	181	424	954	114	416
Sioux City, IA	0	2	1	0	7	0	0	12	0	0	20	21	1	0
Wichita, KS	0	0	0	0	0	1	3	16	9	0	8	21	10	3
Denver, CO	54	79	7	4	78	41	5	-	-	-	154	157	48	9
Salt Lake City, UT	0	5	0	0	46	41	2	10	1	1	16	61	42	3
South Dakota	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Los Angeles, CA	0	25	3	5	18	128	58	56	16	19	32	261	147	82
Phoenix, AR	0	26	10	12	26	23	7	3	3	0	0	55	36	19
Idaho	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Portland, OR	8	61	12	5	0	0	0	-	-	-	52	61	12	5
Seattle, WA	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	72	1,323	133	158	1,438	1,019	353	1,000	745	290	1,136	3,761	1,897	801

TABLE A-6. REHABILITATION MODALITY: PROBLEM DRINKER INPATIENT.

ASAP Site	Enrolled at Beginning of 1972	1972			1973			1974			Still Enrolled at End of 1974	Total		
		Enter	Complete	Dropped	Enter	Complete	Dropped	Enter	Complete	Dropped		Enter	Complete	Dropped
Boston, MA	0	4	8	0	0	0	0	0	0	0	0	4	8	0
Maine	0	32	29	2	14	30	0	12	9	4	0	58	68	6
New Hampshire	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vermont	8	30	28	4	20	24	0	10	11	0	1	60	63	4
Nassau Co., NY	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Puerto Rico	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Baltimore, MD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delaware	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fairfax Co., VA	0	2	2	0	44	38	0	21	26	0	1	67	66	0
Charlotte, NC	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Columbus, GA	0	5	4	0	9	6	4	3	1	0	2	17	11	4
Richland Co., SC	0	19	8	4	6	3	3	1	1	0	7	26	12	7
Tampa, FL	1	3	2	0	6	3	0	7	5	1	6	16	10	1
Cincinnati, OH	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hennepin Co., MN	0	228	0	9	600	149	51	746	449	86	830	1,574	598	146
Indianapolis, IN	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Washtenaw Co., MI	6	2	4	0	0	0	0	0	0	0	0	0	4	0
Wisconsin	0	42	27	0	0	0	0	0	0	0	15	42	27	0
Albuquerque, NM	0	6	5	1	19	13	3	0	0	0	3	25	18	4
New Orleans, LA	0	14	10	5	2	2	0	0	0	0	0	16	12	5
Oklahoma City, OK	0	4	4	0	1	0	0	0	0	0	1	5	4	0
Pulaski Co., AR	0	0	0	0	0	0	0	0	0	0	0	0	0	0
San Antonio, TX	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Kansas City, MO	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lincoln, NE	0	16	8	3	111	65	16	70	53	13	34	197	126	37
Sioux City, IA	0	0	0	0	1	0	0	33	0	0	34	34	0	0
Wichita, KS	0	0	0	0	22	14	3	49	34	8	12	71	48	11
Denver, CO	8	15	8	2	25	28	6	0	0	0	4	40	36	8
Salt Lake City, UT	0	10	4	0	21	39	1	11	9	0	0	42	52	1
South Dakota	0	58	12	0	93	49	2	52	42	1	97	203	103	3
Los Angeles, CA	0	1	0	0	1	2	2	30	16	0	24	44	18	2
Phoenix, AR	0	2	2	0	0	0	0	0	5	5	0	7	7	0
Idaho	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Portland, OR	1	1	2	0	0	0	0	0	0	0	0	1	2	0
Seattle, WA	103	208	179	37	0	0	0	0	0	0	100	208	179	37
TOTAL	132	702	366	67	1,007	466	91	1,050	661	118	1,175	2,759	1,472	276

TABLE A-7. REHABILITATION MODALITY: PROBLEM DRINKER ALCOHOLICS ANONYMOUS.

ASAP Site	Enrolled at Beginning of 1972	1972			1973			1974			Still Enrolled at End of 1974	Total		
		Enter	Complete	Dropped	Enter	Complete	Dropped	Enter	Complete	Dropped		Enter	Complete	Dropped
Boston, MA	0	11	0	2	0	0	0	0	0	0	9	11	0	2
Maine	0	127	0	20	234	0	38	181	0	76	408	542	0	134
New Hampshire	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vermont	9	19	12	6	31	28	0	33	29	8	9	83	69	14
Nassau Co., NY	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Puerto Rico	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Baltimore, MD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delaware	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fairfax Co., VA	0	109	5	0	0	0	0	0	0	0	104	109	5	0
Charlotte, NC	0	5	0	0	0	0	0	0	0	0	5	5	0	0
Columbus, GA	0	6	1	0	0	0	0	0	0	0	0	0	1	0
Richland Co., SC	0	3	1	1	0	0	0	0	0	0	1	3	1	1
Tampa, FL	0	511	0	0	795	0	0	889	0	0	2,195	2,195	0	0
Cincinnati, OH	0	70	74	0	77	31	0	0	0	0	42	147	105	0
Winnepin Co., MN	0	141	0	7	563	47	45	587	314	48	830	1,291	361	100
Indianapolis, IN	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Washtenaw Co., MI	0	41	0	0	0	0	0	0	0	0	41	41	0	0
Wisconsin	0	53	0	7	0	0	0	0	0	0	46	53	0	7
Albuquerque, NM	0	0	0	0	32	9	3	0	0	0	20	32	9	3
New Orleans, LA	0	1	0	1	3	0	0	0	0	0	3	4	0	1
Oklahoma City, OK	0	135	22	5	305	130	14	167	189	13	234	607	341	32
Pulaski Co., AR	0	0	0	0	11	0	0	0	0	0	11	11	0	0
San Antonio, TX	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Kansas City, MO	0	274	0	0	142	0	0	6	0	0	422	422	0	0
Lincoln, NE	0	223	2	46	355	30	88	105	255	46	216	683	287	180
Sioux City, IA	0	5	2	0	35	0	0	60	0	0	99	101	2	0
Wichita, KS	0	0	0	0	45	5	5	189	53	35	136	234	58	40
Denver, CO	30	40	25	8	143	66	17	0	0	0	97	183	91	25
Salt Lake City, UT	0	23	0	0	125	153	2	119	35	10	67	267	188	12
South Dakota	0	193	0	0	232	0	0	239	0	0	564	564	0	0
Los Angeles, CA	0	112	11	5	765	257	98	1,150	957	91	607	2,027	1,225	195
Phoenix, AR	0	45	0	2	29	37	22	12	10	1	8	86	47	31
Idaho	1	30	0	0	81	0	0	39	0	0	151	150	0	0
Portland, OR	8	40	4	3	0	0	0	0	0	0	41	40	4	3
Seattle, WA	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	48	2,211	159	120	3,904	793	332	3,776	1,842	320	6,366	9,891	2,794	780

TABLE A-8. REHABILITATION MODALITY: ALL NON-PROBLEM DRINKER REHABILITATION PROGRAMS.

ASAP Site	Enrolled at Beginning of 1972	1972			1973			1974			Still Enrolled at End of 1974	Total		
		Enter	Complete	Dropped	Enter	Complete	Dropped	Enter	Complete	Dropped		Enter	Complete	Dropped
Boston, MA	0	22	21	1	199	188	11	119	107	12	0	340	316	24
Maine	0	0	0	0	0	0	0	20	20	0	0	20	20	0
New Hampshire	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vermont	0	251	222	10	405	401	9	433	440	5	2	1,089	1,063	24
Nassau Co., NY	252	192	148	23	0	0	0	-	-	-	273	192	148	23
Puerto Rico	0	0	0	0	193	193	0	2,034	2,034	0	0	2,227	2,227	0
Baltimore, MD	0	0	0	0	0	0	0	109	16	7	86	109	16	7
Delaware	0	0	0	0	4	4	0	0	0	0	0	4	4	0
Fairfax Co., VA	0	972	895	5	2,366	1,734	226	296	424	86	264	3,634	3,053	317
Charlotte, NC	0	0	0	0	461	437	19	-	-	-	5	461	437	19
Columbus, GA	0	844	755	89	626	537	196	239	228	11	-	1,709	1,520	296
Richland Co., SC	0	89	76	12	456	404	7	742	699	44	45	1,287	1,179	63
Tampa, FL	0	2	2	0	10	7	2	26	24	2	1	38	33	4
Cincinnati, OH	0	457	441	3	629	650	4	424	378	110	-	1,510	1,469	117
Hennepin Co., MN	0	384	47	3	640	310	12	380	603	6	393	1,374	960	21
Indianapolis, IN	0	357	285	0	851	1,004	222	836	808	0	-	2,044	2,097	222
Washtenaw Co., MI	118	292	233	0	0	0	0	-	-	-	177	292	233	0
Wisconsin	0	158	258	1	0	0	0	-	-	-	-	158	258	1
Albuquerque, NM	15	629	347	21	800	653	28	-	-	-	395	1,429	1,000	49
New Orleans, LA	0	779	709	7	830	582	27	699	545	0	438	2,308	1,836	34
Oklahoma City, OK	0	135	20	3	190	161	2	49	95	2	91	374	276	7
Pulaski Co., AR	0	0	0	0	0	0	0	0	0	0	0	0	0	0
San Antonio, TX	0	196	157	0	192	176	0	171	150	0	82	565	483	0
Kansas City, MO	0	629	602	23	1,656	945	9	2,414	2,030	87	1,003	4,699	3,577	119
Lincoln, NE	0	160	0	44	186	83	79	255	150	50	151	601	233	217
Sioux City, IA	0	16	15	0	148	139	10	166	163	2	1	330	317	12
Wichita, KS	0	17	14	3	81	68	12	30	31	2	-	128	113	17
Denver, CO	0	40	16	3	18	15	5	-	-	-	19	58	31	8
Salt Lake City, UT	0	265	72	3	598	1,726	25	857	689	16	-	1,720	2,487	44
South Dakota	0	56	64	2	191	185	6	91	91	0	-	338	340	8
Los Angeles, CA	0	34	10	2	697	355	55	1,250	888	122	549	1,981	1,253	179
Phoenix, AR	0	2,569	1,689	527	3,447	2,679	891	2,083	1,855	275	188	8,104	6,223	1,693
Idaho	1	199	112	5	1,013	587	8	1,060	658	5	898	2,272	1,357	18
Portland, OR	67	983	979	71	0	0	0	-	-	-	0	983	979	71
Seattle, WA	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	453	10,697	8,189	851	16,893	14,223	1,865	14,788	13,126	844	5,061	42,378	35,538	3,570

TABLE A-7. REHABILITATION MODALITY: PROBLEM DRINKER ALCOHOLICS ANONYMOUS.

ASAP Site	Enrolled at Beginning of 1972	1972			1973			1974			Still Enrolled at End of 1974	Total		
		Enter	Complete	Dropped	Enter	Complete	Dropped	Enter	Complete	Dropped		Enter	Complete	Dropped
Boston, MA	0	11	0	2	0	0	0	0	0	0	9	11	0	2
Maine	0	127	0	20	234	0	38	181	0	76	408	542	0	134
New Hampshire	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vermont	9	19	12	6	31	28	0	33	29	8	9	83	69	14
Nassau Co., NY	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Puerto Rico	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Baltimore, MD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delaware	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fairfax Co., VA	0	109	5	0	0	0	0	0	0	0	104	109	5	0
Charlotte, NC	0	5	0	0	0	0	0	0	0	0	5	5	0	0
Columbus, GA	0	0	1	0	0	0	0	0	0	0	0	0	1	0
Richland Co., SC	0	3	1	1	0	0	0	0	0	0	0	3	1	1
Tampa, FL	0	511	0	0	795	0	0	889	0	0	2,195	2,195	0	0
Cincinnati, OH	0	70	74	0	77	31	0	0	0	0	42	147	105	0
Winnepin Co., MN	0	141	0	7	563	47	45	587	314	48	830	1,291	361	100
Indianapolis, IN	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Washtenaw Co., MI	0	41	0	0	0	0	0	0	0	0	41	41	0	0
Wisconsin	0	53	0	7	0	0	0	0	0	0	46	53	0	7
Albuquerque, NM	0	0	0	0	32	9	3	0	0	0	20	32	9	3
New Orleans, LA	0	1	0	1	3	0	0	0	0	0	3	4	0	1
Oklahoma City, OK	0	135	22	5	305	130	14	167	189	13	234	607	341	32
Pulaski Co., AR	0	0	0	0	11	0	0	0	0	0	11	11	0	0
San Antonio, TX	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Kansas City, MO	0	274	0	0	142	0	0	6	0	0	422	422	0	0
Lincoln, NE	0	223	2	46	355	30	88	105	255	46	216	693	287	180
Sioux City, IA	0	5	2	0	36	0	0	60	0	0	99	101	2	0
Wichita, KS	0	0	0	0	45	5	5	189	53	35	136	234	58	40
Denver, CO	30	40	25	8	143	66	17	0	0	0	97	183	91	25
Salt Lake City, UT	0	23	0	0	125	153	2	119	35	10	67	267	188	12
South Dakota	0	193	0	0	132	0	0	239	0	0	564	564	0	0
Los Angeles, CA	0	112	11	5	765	257	98	1,150	957	91	607	2,027	1,225	195
Phoenix, AR	0	45	0	8	29	37	22	12	10	1	8	86	47	31
Idaho	1	30	0	0	81	0	0	39	0	0	151	150	0	0
Portland, OR	8	40	4	3	0	0	0	0	0	0	41	40	4	3
Seattle, WA	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	48	2,211	159	120	3,904	793	332	3,776	1,842	328	6,366	9,891	2,794	790

TABLE A-8. REHABILITATION MODALITY: ALL NON-PROBLEM DRINKER REHABILITATION PROGRAMS.

ASAP Site	Enrolled at Beginning of 1972	1972			1973			1974			Still Enrolled at End of 1974	Total		
		Enter	Complete	Dropped	Enter	Complete	Dropped	Enter	Complete	Dropped		Enter	Complete	Dropped
Boston, MA	0	22	21	1	199	188	11	119	107	12	0	340	316	24
Maine	0	0	0	0	0	0	0	20	20	0	0	20	20	0
New Hampshire	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vermont	0	251	222	10	405	401	9	433	440	5	2	1,089	1,063	24
Nassau Co., NY	252	192	148	23	0	0	0	-	-	-	273	192	148	23
Puerto Rico	0	0	0	0	193	193	0	2,034	2,034	0	0	2,227	2,227	0
Baltimore, MD	0	0	0	0	0	0	0	109	16	7	86	109	16	7
Delaware	0	0	0	0	4	4	0	0	0	0	0	4	4	0
Fairfax Co., VA	0	972	895	5	2,366	1,734	226	296	424	86	264	3,634	3,053	317
Charlotte, NC	0	0	0	0	461	437	19	-	-	-	5	461	437	19
Columbus, GA	0	844	755	89	626	537	196	239	228	11	-	1,709	1,520	296
Richland Co., SC	0	89	76	12	456	404	7	742	699	44	45	1,287	1,179	63
Tampa, FL	0	2	2	0	10	7	2	26	24	2	1	38	33	4
Cincinnati, OH	0	457	441	3	629	650	4	424	378	110	-	1,510	1,469	117
Hennepin Co., MN	0	354	47	3	640	310	12	380	603	6	393	1,374	960	21
Indianapolis, IN	0	357	285	0	851	1,004	222	836	808	0	-	2,044	2,097	222
Washtenaw Co., MI	118	292	233	0	0	0	0	-	-	-	177	292	233	0
Wisconsin	0	158	258	1	0	0	0	-	-	-	-	158	258	1
Albuquerque, NM	15	629	347	21	800	653	28	-	-	-	395	1,429	1,000	49
New Orleans, LA	0	779	709	7	830	582	27	699	545	0	438	2,308	1,836	34
Oklahoma City, OK	0	135	20	3	190	161	2	49	95	2	91	374	276	7
Pulaski Co., AR	0	0	0	0	0	0	0	0	0	0	0	0	0	0
San Antonio, TX	0	196	157	0	198	176	0	171	150	0	82	565	493	0
Kansas City, MO	0	629	602	23	1,656	945	9	2,414	2,030	97	1,003	4,699	3,577	119
Lincoln, NE	0	160	0	44	186	83	79	255	150	50	151	601	233	217
Sioux City, IA	0	16	15	0	148	139	10	166	163	2	1	330	317	12
Wichita, KS	0	17	14	3	81	68	12	30	31	2	-	128	113	17
Denver, CO	0	40	16	3	18	15	5	-	-	-	19	58	31	8
Salt Lake City, UT	0	265	72	3	598	1,726	25	857	689	16	-	1,720	2,487	44
South Dakota	0	56	64	2	191	185	6	91	91	0	-	338	340	8
Los Angeles, CA	0	34	10	2	697	355	55	1,250	888	122	549	1,981	1,253	179
Phoenix, AR	0	2,569	1,689	527	3,447	2,679	891	2,080	1,855	275	188	8,104	6,223	1,693
Idaho	1	199	112	5	1,013	587	8	1,060	658	5	898	2,272	1,357	18
Portland, OR	67	983	979	71	0	0	0	-	-	-	0	983	979	71
Seattle, WA	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	453	10,697	8,189	661	16,893	14,223	1,865	14,788	13,126	844	5,061	42,378	35,538	3,570

TABLE A-9. REHABILITATION MODALITY: NON-PROBLEM DRINKER ALCOHOL SAFETY SCHOOL.

ASAP Site	Enrolled at Beginning of 1972	1972			1973			1974			Still Enrolled at End of 1974	Total		
		Enter	Complete	Dropped	Enter	Complete	Dropped	Enter	Complete	Dropped		Enter	Complete	Dropped
Boston, MA	0	22	21	1	145	134	11	119	107	12	0	286	262	24
Maine	0	0	0	0	0	0	0	20	20	0	0	20	20	0
New Hampshire	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vermont	0	225	211	7	341	347	2	398	397	0	0	964	955	9
Nassau Co., NY	252	192	148	23	0	0	0	-	-	-	273	192	148	23
Puerto Rico	0	0	0	0	193	193	0	2,034	2,034	0	0	2,227	2,227	0
Baltimore, MD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delaware	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fairfax Co., VA	0	943	765	7	2,195	1,692	218	265	353	59	309	3,403	2,810	284
Charlotte, NC	0	0	0	0	461	437	15	-	-	-	9	461	437	15
Columbus, GA	0	844	755	89	621	536	195	238	233	11	-	1,703	1,524	295
Richland Co., SC	0	84	73	11	438	390	6	689	657	34	40	1,211	1,120	51
Tampa, FL	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cincinnati, OH	0	456	441	3	621	644	2	418	377	102	-	1,495	1,462	107
Hennepin Co., MN	0	294	35	2	553	383	10	326	534	5	204	1,173	952	17
Indianapolis, IN	0	357	285	0	851	1,004	222	654	613	0	-	1,862	1,902	222
Washtenaw Co., MI	66	264	252	0	0	0	0	-	-	-	78	264	252	0
Wisconsin	0	158	258	0	0	0	0	-	-	-	-	158	258	0
Albuquerque, NM	15	629	347	21	800	653	28	-	-	-	395	1,429	1,000	49
New Orleans, LA	0	779	709	0	828	823	13	699	699	0	62	2,306	2,231	13
Oklahoma City, OK	0	42	36	6	50	42	0	17	9	2	14	109	67	8
Pulaski Co., AR	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sar. Antonio, TX	0	196	157	0	198	176	0	171	149	0	83	565	482	0
Kansas City, MO	0	44	40	1	56	24	0	106	78	18	45	206	142	19
Lincoln, NE	0	68	32	2	129	129	6	65	59	0	34	262	220	8
Siox City, IA	0	16	15	0	144	137	10	163	161	2	-	323	313	12
Wichita, KS	0	17	14	3	81	68	12	23	26	2	1	126	108	17
Denver, CO	0	40	38	3	3	2	0	-	-	-	0	43	40	3
Salt Lake City, UT	0	265	72	3	537	1,610	25	856	689	16	-	1,708	2,371	44
South Dakota	0	56	64	2	191	185	6	91	91	0	-	338	340	8
Los Angeles, CA	0	25	10	2	48	346	22	271	168	18	211	777	524	42
Phoenix, AR	0	2,569	1,689	527	3,447	2,679	891	1,322	1,187	206	159	7,338	5,555	1,624
Idaho	0	117	112	5	595	587	8	663	658	5	0	1,375	1,357	18
Portland, OR	67	983	979	71	0	0	0	-	-	-	0	983	979	71
Seattle, WA	0	0	0	0	0	0	0	-	-	-	0	0	0	0
TOTAL	400	9,685	7,558	789	14,009	13,221	1,702	9,613	9,299	492	1,917	33,307	30,078	2,983

TABLE A-10. REHABILITATION MODALITY: ALL UNIDENTIFIED DRINKER REHABILITATION PROGRAMS.

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ASAP Site	Enrolled at Beginning of 1972	1972			1973			1974			Still Enrolled at End of 1974	Total		
		Enter	Complete	Dropped	Enter	Complete	Dropped	Enter	Complete	Dropped		Enter	Complete	Dropped
Boston, MA	0	0	0	0	42	33	8	1	1	0	1	43	34	8
Maine	0	0	0	0	171	69	32	124	113	0	81	295	182	32
New Hampshire	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vermont	0	36	27	3	72	64	12	111	20	92	1	219	111	107
Nassau Co., NY	0	1,029	615	252	0	0	0	-	-	-	162	1,029	615	252
Puerto Rico	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Baltimore, MD	0	0	0	0	0	0	0	182	7	26	149	182	7	26
Delaware	0	0	0	0	19	19	0	0	0	0	0	19	19	0
Fairfax Co., VA	0	359	211	9	1,254	1,002	165	700	714	189	23	2,313	1,927	363
Charlotte, NC	0	608	452	25	355	315	39	-	-	-	132	963	767	64
Columbus, GA	0	0	0	0	9	6	3	25	22	3	0	34	28	6
Richland Co., SC	0	31	26	3	285	186	7	225	207	11	101	541	419	21
Tampa, FL	50	3,207	2,459	220	4,326	3,709	549	3,882	3,427	496	605	11,415	9,595	1,265
Cincinnati, OH	0	0	0	0	44	44	0	53	44	13	-	97	88	13
Hennepin Co., MN	0	53	11	4	301	99	11	92	269	9	43	446	379	24
Indianapolis, IN	0	1	0	0	0	0	0	0	0	0	1	1	0	0
Washtenaw Co., MI	6	41	3	1	0	0	0	-	-	-	43	41	3	1
Wisconsin	0	0	0	0	0	0	0	-	-	-	0	0	0	0
Albuquerque, NM	21	441	241	15	457	237	23	-	-	-	403	898	478	38
New Orleans, LA	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Oklahoma City, OK	0	212	52	7	380	277	10	157	229	8	186	749	538	25
Polaski Co., AR	0	0	0	0	0	0	0	0	0	0	0	0	0	0
San Antonio, TX	0	252	177	0	878	745	0	1,259	1,107	0	370	2,399	2,029	0
Kansas City, MO	0	234	166	43	1,137	231	12	343	172	85	1,005	1,714	569	140
Lincoln, NE	0	4	0	0	0	0	0	0	0	0	4	4	0	0
Sioux City, IA	0	1	1	0	1	1	0	9	8	1	0	11	10	1
Wichita, KS	0	2	1	1	36	26	9	25	17	3	6	63	44	13
Denver, CO	0	300	118	19	336	168	72	-	-	-	259	636	286	91
Salt Lake City, UT	0	44	0	0	50	147	0	0	0	0	-	94	147	0
South Dakota	0	0	0	0	0	0	0	1	0	0	1	1	0	0
Los Angeles, CA	0	102	26	2	1,518	732	140	1,536	777	168	1,311	3,156	1,535	310
Phoenix, AR	0	1,366	968	277	976	676	265	89	73	8	164	2,431	1,717	550
Idaho	12	165	72	5	725	480	9	813	537	5	605	1,703	1,089	20
Portland, OR	3	28	28	3	0	0	0	-	-	-	0	28	28	3
Seattle, WA	0	0	0	0	0	0	0	-	-	-	0	0	0	0
TOTAL	92	8,526	5,634	899	13,372	9,266	1,366	9,627	7,744	1,117	5,657	31,525	22,644	3,373

TABLE A-11. REHABILITATION MODALITY: UNIDENTIFIED DRINKER ALCOHOL SAFETY SCHOOL.

ASAP Site	Enrolled at Beginning of 1972	1972			1973			1974			Still Enrolled at End of 1974	Total		
		Enter	Complete	Dropped	Enter	Complete	Dropped	Enter	Complete	Dropped		Enter	Complete	Dropped
Boston, MA	0	0	0	0	42	33	8	1	1	0	1	43	34	8
Maine	0	0	0	0	18	10	10	124	113	0	9	142	123	10
New Hampshire	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vermont	0	29	24	1	54	48	8	111	19	92	2	194	91	101
Nassau Co., NY	0	1,029	615	252	0	0	0	-	-	-	162	1,029	615	252
Puerto Rico	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Baltimore, MD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delaware	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fairfax Co., VA	0	0	0	0	18	18	0	512	314	77	121	530	332	77
Charlotte, NC	0	608	452	25	355	315	39	-	-	-	132	963	767	64
Columbus, GA	0	0	0	0	8	6	2	25	22	3	0	33	28	5
Richland Co., SC	0	27	25	2	250	176	5	179	171	3	74	456	372	10
Tampa, FL	50	3,207	2,459	220	4,326	3,709	549	3,882	3,427	496	605	11,415	9,595	1,265
Cincinnati, OH	0	0	0	0	37	37	0	44	41	7	-	81	78	7
Hennepin Co., MN	0	11	7	0	112	48	3	31	85	2	9	154	140	5
Indianapolis, IN	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Washtenaw Co., MI	3	16	5	0	0	0	0	-	-	-	14	16	5	0
Wisconsin	0	0	0	0	0	0	0	-	-	-	0	0	0	0
Albuquerque, NM	21	441	241	15	457	237	23	-	-	-	403	898	478	38
New Orleans, LA	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Oklahoma City, OK	0	54	53	1	99	84	1	64	46	4	28	217	183	6
Pulaski Co., AR	0	0	0	0	0	0	0	0	0	0	0	0	0	0
San Antonio, TX	0	262	177	0	873	745	0	1,257	1,105	0	370	2,397	2,027	0
Kansas City, MO	0	59	49	9	86	20	0	53	37	9	74	198	106	18
Lincoln, NE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sicou City, IA	0	1	1	0	2	1	1	3	3	0	0	6	5	1
Wichita, KS	0	0	0	0	36	26	9	16	13	3	1	52	39	12
Denver, CO	0	134	111	7	25	20	1	-	-	-	20	159	131	8
Salt Lake City, UT	0	44	0	0	47	68	0	1	1	0	23	92	69	0
South Dakota	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Los Angeles, CA	0	53	26	2	70	502	27	723	294	36	596	1,483	822	65
Phoenix, AR	0	1,366	968	277	976	676	265	29	24	2	159	2,371	1,668	544
Idaho	0	78	72	5	489	480	9	542	537	5	0	1,109	1,689	20
Portland, OR	3	23	28	3	0	0	0	-	-	-	0	23	28	3
Seattle, WA	0	0	0	0	0	0	0	-	-	-	0	0	0	0
TOTAL	77	7,447	5,313	820	9,022	7,259	960	7,596	6,253	735	2,803	24,065	18,825	2,519

REFERENCES

- ¹Joscelyn, J. D. and Jones, R. K. A systems analysis of the traffic law system: summary volume. NHTSA Report No. DOT-HS-800-640, Institute for Research in Public Safety, Indiana University, October, 1971.
- ²NHTSA, Office of Alcohol Countermeasures, Alcohol Safety Action Projects: Evaluation of Operations, Volume III, 1972.
- ³¹²NHTSA, Office of Driver and Pedestrian Programs, Alcohol Safety Action Projects: Evaluation of Operations - 1974, Vol. II Detailed Analysis, 1976.
- ⁴Ellingstad, V. S. and Struckman, D. L. Preliminary guidelines for alcohol safety action project evaluation procedures: Appendix H - Table I5 and analytic study No. 6. Interim Report, Contract DOT-HS-191-3-759, Human Factors Laboratory, University of South Dakota, December, 1973.
- ⁵²⁶Ellingstad, V. S. and Struckman, D. L. Alcohol safety action project diagnosis and referral evaluation efforts: A review of reporting procedures. Interim Report, Contract DOT-HS-191-3-759, Human Factors Laboratory, University of South Dakota, April, 1974.
- ⁶²⁸Ellingstad, V. S. Alcohol safety action projects: 1975 interim assessments of alcohol rehabilitation efforts, analytic study No. 6. Interim Report, Contract DOT-HS-191-3-759, Human Factors Laboratory, University of South Dakota, March, 1976.
- ⁷¹⁹²³²⁵Reis, R. E. A preliminary program level evaluation model for alcohol safety schools. Interim Report, Contract DOT-HS-191-3-759, Human Factors Laboratory, University of South Dakota, July, 1974.
- ⁸Reis, R. E., Smith, M. F., and Beach, M. E. Interim assessments of the impact of ASAP on the traffic safety system: 1974 analytic studies No. 4. Interim Report, Contract DOT-HS-191-3-759, Human Factors Laboratory, University of South Dakota, January, 1975.

References (Continued)

- ⁹Reis, R. E. Alcohol safety action projects: 1975 interim assessments of ASAP impact on the judicial system, analytic study No. 4. Interim Report, Contract DOT-HS-191-3-759, Human Factors Laboratory, University of South Dakota (in press), 1976.
- ¹⁰⁻²⁷Struckman, D. L., Spiegel, D. K., Olshan, M. D., Springer, T. J., and Sapp, J. H. Interim analyses of drinker diagnosis, referral and rehabilitation countermeasures: 1974 analytic studies No. 5 and 6. Interim Report, Contract DOT-HS-191-3-759, Human Factors Laboratory, University of South Dakota, December, 1974.
- ¹¹Struckman-Johnson, D. L. Alcohol safety action projects: 1975 interim assessments of drinker diagnosis and referral, analytic study No. 5. Interim Report, Contract DOT-HS-191-3-759. Human Factors Laboratory, University of South Dakota, March, 1976.
- ¹³Campbell, D. T. and Stanley, J. C. Experimental and Quasi-Experimental Designs for Research, Rand McNally, Chicago, 1963.
- ¹⁴⁻²⁴Cutler, S. J. and Ederer, F. Maximum utilization of the life table method in analyzing survival. Journal of Chronic Diseases, December, 1958, 699-712.
- ¹⁵⁻¹⁶Dixon, W. J. (Ed.) BMD: Biomedical Computer Programs, University of California Press, Berkeley, 1974, 465-484.
- ¹⁷Morrison, D. F. Multivariate Statistical Methods. New York: McGraw Hill, 1967.
- ¹⁸Harris, Richard J. A Primer of Multivariate Statistics. New York: Academic Press, 1975.
- ²⁰Nichols, J. L. and Reis, R. E. One model for the evaluation of ASAP rehabilitation effort. National Technical Information Service, DOT-HS-801-244, Springfield, Virginia, 1974.
- ²¹Ward, J. H. Hierarchical grouping to optimize an objective function. American Statistical Association Journal, 1963, 58, 236-244.

References (Continued)

²²Veldman, D. J. Fortran Programming for the Behavioral Sciences. New York: Holt, Reinhart and Winston, pp. 308-317.